

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-31				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3			Title of Work Assignment/SF Site Name Reg Dev and Transparency Tools				
Contractor ABT ASSOCIATES INC.						Specify Section and paragraph of Contract SOW Section III (C., Technical Assistance; C.1 + C.7)				
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   08/03/2016   To   07/31/2017				
Comments:										
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
09/11/2013   To   07/31/2017				0						
This Action:				1,127						
Total:				1,127						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name   Caryn Muellerleile  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-2855 FAX Number:				
Project Officer Name   Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1044 FAX Number:				
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:				
Contracting Official Name   Tammy Adams <div style="display: flex; justify-content: space-between;"> <div> <b>TAMMY ADAMS</b>            (Signature)         </div> <div> <small>Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS, dnQualifier=0000018417            Date: 2016.08.03.13:46:06 -04'00'</small> </div> </div>						Branch/Mail Code: Phone Number: 513-487-2030 FAX Number: 513-487-2545				

## **WORK ASSIGNMENT**

**I. Title:** EPA Regulatory Development and Regulation Transparency Tools

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-31

**III. Estimated Period of Performance:** Date of Issuance through July 31, 2017

**IV. Estimated Level of Effort:** 1,127 hours

**V. Key EPA Personnel:**

**Work Assignment Contracting Officers Representative (WACOR):**

Caryn Muellerleile  
OA/OP/ORPM/RMD (1803A)  
202/564-2855  
202/564-8601 (fax)

**Alternate Work Assignment Contracting Officers Representative:**

Darryl Adams  
OA/OP/ORPM/RMD (1803A)  
202/564-6569  
202/564-8601 (fax)

**VI. Background and Purpose:**

The 1972 Clean Water Act (CWA) directs the Environmental Protection Agency (EPA) to develop national technology-based regulations for categories of industries that discharge pollutants directly to surface waters (effluent guidelines) or that discharge pollutants indirectly through sewage treatment plants (pretreatment standards). The CWA also directs EPA to develop national technology-based regulations for new industrial facilities (new source performance standards).

The Office of Regulatory Policy and Management (ORPM) in the EPA's Office of Policy provides support and guidance on EPA's Action Development Process (ADP), used in the development of agency regulations and other substantial cross-cutting actions, such as CWA general permits and guidance documents. Because rule development such a primary focus of EPA activity, the ADP has existed for over 25 years to achieve the timeliest, most efficient, and most effective method for rule development. The process was designed for agency professionals to develop rules based on sound scientific, economic, legal, and policy analyses. The ADP serves as a framework to ensure issues are addressed during appropriate rule development stages. The ADP is also used to evaluate the needs of a variety of external stakeholders, including small



businesses, States, municipalities, tribes, children, older adults, minority and low-income populations.

Under Executive Orders 12866 and 13563, EPA is required to estimate the potential benefits and costs to society. As such, the purpose of this Work Assignment (WA) is to provide ongoing and new support for a series of regulatory tools for use by all EPA rulewriters that include database and Web-based informational and educational materials, during the months of August 2016 to July 2017. These tools are intended to help regulatory analysts throughout the Agency, regulated entities, and other non-EPA stakeholders understand EPA's regulatory process and requirements. These informational and educational websites and databases include information about the CWA, updates on regulations written under authority of the CWA, and descriptions of EPA's obligations under a number of statutes and Executive Orders (EOs), including EOs 12866 and 13563. The contractor shall assist the ORPM in developing and maintaining these website and database related tools.

Under this work assignment, the contractor shall conduct all analyses requiring the collection and manipulation of data and models in accordance with the EPA approved quality assurance (QA) project plan. Because this work assignment requires the contractor to collect or use environmental or economic data, a Quality Assurance Project Plan (QAPP) is required. The QAPP shall describe the procedures for assuring the quality of the primary and secondary environmental and/or economic data used for this work assignment.

In carrying out the tasks specified in this work assignment, the contractor may be called upon to build upon and continue work performed under WA 2-31 of this contract and WAs #3-61, 4-61, and 4-81 under Contract EP-W-11-003. The work performed under this work assignment will not duplicate work conducted under the previously listed work assignments, nor any tasks completed under Contracts EP-C-07-023 or EP-D-08-100.

Under the previous work assignments, Abt Associates performed the following tasks:

- Designed and/or redesigned and assisted in maintaining the following public-facing and Intranet web areas:
  - Laws & Regulations (<https://www.epa.gov/laws-regulations>).
  - Regulatory Development and Retrospective Review Tracker (<http://www.epa.gov/regdarrt/>).
  - Actions Initiated by Month (<https://www.epa.gov/laws-regulations/actions-initiated-month>).
  - Small Entities and Rulemaking public site (<https://www.epa.gov/reg-flex>).
  - Intranet "Action Development Process Library" site (<http://intranet.epa.gov/adplibrary/index.htm>).
- Developed and/or assisted in maintaining the following EPA regulatory databases, in Lotus Notes/Domino, Oracle, and/or Java design environments:
  - ADP TRACKER (file name: ADP.nsf).
  - ADP Directory (file name: ADP\_Names.nsf).
  - ADP Feedback & Support (file name: ADP\_Feedback.nsf).
  - ADP Reporting (file name: ADPTR with access through

- <https://javaintranet.epa.gov/ADPTracker>), in beta form.
- Regulatory Gateway Web Site (file name: RuleGate.nsf).
  - Federal Register (FR) Dailies (file name: Frdaily.nsf)

## **VII. General Requirements of the Work Assignment and Schedule**

Confidential Business Information: During the course of the work assignment, the contractor shall be accessing and evaluating CBI. As such, the contractor shall adhere to EPA's CBI policy and other procedures as described in the contract clauses (Clauses H.15-H19 and H.21). The contractor must maintain CBI security clearance to use CBI information. The contractor shall not disclose any CBI to anyone other than EPA without prior written approval from the EPA WACOR. The contractor shall at all times, adhere to Confidential Business Information (CBI) procedures when handling industry information. The contractor shall manage all reports, documents, and other materials and all draft documents developed under this work assignment in accordance with the procedures set forth in our "Office of Science and Technology Confidential Business Information Application Security Plan" (August 2011) or its successor approved plans.

Budget Reporting: The contractor must also report to the EPA WACOR when 75 percent of the approved Work plan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor should refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA Contract Level Contracting Officer Representative (CL-COR), and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: EPA anticipates a small need for non-local travel by contractor employees and/or subcontractors to support the scope of this work assignment. Contractor employees located in the Cambridge, MA location may need to coordinate travel to meet with EPA WACOR in Washington, DC and/or provide training or additional assistance to EPA employees.

Deliverable Formatting: All memos, draft comments, summaries and responses, and chapters are to be provided in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by EPA. Memos are to be written in a manner which will make them easy to turn into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the contractor shall use decimal align in all tables containing columns of numbers of varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the EPA WACOR and will be formatted to be in compliance with the Section 508 Amendment to the Rehabilitation Act of 1973.

## **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the EPA WACOR's comments.

### **Task 1 - Prepare Work Plan**

The contractor shall prepare a work plan within 15 calendar days of receipt of the work assignment. The work plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the CL-COR and the CO will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the Contracting Officer. The contractor shall prepare a revised work plan incorporating the Contracting Officer's comments, if required.

#### **Deliverables and schedule under Task 1**

1. Work plan within 15 calendar days of receipt of work assignment.

### **Task 2 - Prepare Standardized Naming Convention and Version Control Memorandum**

The contractor shall prepare and submit a memorandum that proposes a standardized naming convention and version control (SNCVC) for all deliverables associated with the WA. This system will ensure that deliverables are clearly named and dated and that the sequence of versions of a document is clear. The EPA WACOR will review the memorandum and then provide the contractor with written notification of approval or edits that need to be made. The contractor shall prepare a revised SNCVC memorandum incorporating the EPA WACOR's comments, if required. After receiving notification of approval the contractor shall use this standardized convention for all deliverables associated with the work assignment(s). The EPA WACOR may request through written technical direction the contractor amend the SNCVC memorandum at any point during the WA.

## **Deliverables and schedule under Task 2**

**2a.** SNCVC memorandum within 7 calendar days of work plan approval.

**2b.** If required, revised memorandum within 3 calendar days of receipt of comments from the EPA WACOR, at technical direction of EPA WACOR.

**Task 3 - Revise the beta ADP Reporting database in Oracle/Java for production launch and provide operations and maintenance of ADP TRACKER and relational databases in Lotus Notes** [Section III (C., Technical Assistance; C.1. Collection/Preparation of Reports and C.7. Database Development and Management) of Contract EP-C-13-039 Performance Work Statement (PWS)]

The ADP Reporting database and related ADP TRACKER databases (including FR Dailies) provide agency staff, management, and external stakeholders with the most comprehensive data and up-to-date information on EPA's rulemakings. The contractor shall use feedback compiled during beta testing of the ADP Reporting database to complete its design work for full production launch. Related Lotus Notes and Domino databases shall be regularly reviewed for any operating and maintenance issues, including the expanded use of electronic signature functions for **Federal Register** documents. These relational databases maintained and utilized by ORPM include ADP TRACKER, ADP Directory, ADP Feedback and Support, ADP Archive, FR Dailies, etc.

With technical guidance from EPA, the contractor shall develop new code, as needed, to enable these ADP systems to perform regulatory workflows as requested for ORPM. Additional design work may be necessary with the addition of new modules into the suite of ADP databases. This task includes continuing to assist EPA with common development tasks, including creating and maintaining regulatory database reports.

## **Deliverables and schedule under Task 3**

**3a.** The beta ADP Reporting database, as developed under previously referenced contracts, shall be modified based on beta tester feedback and further WACOR specification. This database shall meet all application deployment checklist (ADC) specifications for development and production application hosting at EPA's National Computing Center (NCC).

**3b.** The contractor shall troubleshoot technical issues with the ADP TRACKER databases with the technical guidance of EPA.

**3c.** The contractor shall provide assistance with common development tasks, including customizable regulatory database reports, as requested by the EPA WACOR.

**Task 4 - Create or revise training materials and user manuals** [Section III (C., Technical Assistance; C.1. Collection/Preparation of Reports) of Contract EP-C-13-039 PWS]

The contractor shall provide new or revised training materials and/or user guides as requested by

the EPA WACOR. These subject areas, among others, include:

- Rule development procedure(s)
- Rule tracking data capture and input
- Task description for users with different roles or responsibilities
- Function of workflow processes
- Generating regulatory reports

The contractor shall support EPA developing user manuals and other help documents at the request of the WACOR in written technical direction. The contractor shall answer or aid in resolving technical issues related to learning the various regulatory databases, writing help documents and assisting with training of users.

#### **Deliverables and schedule under Task 4**

**4a.** The contractor shall develop and deliver regulation development training guides or materials, as requested, for EPA trainers within 40 work days of the WACOR's request.

**4b.** The contractor shall draft or revise user guides for the regulation tracking databases described in section VI above. The Contractor shall continue to draft or revise user guides as requested by WACOR for new ADP database features developed under Task 3 above.

**4c.** The contractor shall recommend changes to the user guides and/or other resource documents to support changes executed under Task 3. The WACOR will approve recommended changes.

#### **Task 5 – Refine and update EPA's rulemaking statistics** [Section III (C., Technical Assistance; C.1. Collection/Preparation of Reports) of Contract EP-C-13-039 PWS]

EPA receives a number of queries from Congress, the press, and other interested parties about its volume of rulemaking activity. Under past work assignments, the contractor was tasked with launching a public internet website about EPA's annual regulatory activity, including regulations from the Office of Water. The Regulatory Statistics or "Reg Stat" website was later removed due to a number of discovered data inaccuracies. Under this WA, the contractor shall work with the WACOR to review the EPA rulemaking data for calendar years 2006-2012, categorize the information for inclusion or exclusion, and develop statistics for internal use from subsequent calendar years using revised inclusion criteria.

The activities in this task involve gathering, evaluating, analyzing, or otherwise using existing environmental data (also known as "secondary" use of data). Therefore, the contractor must prepare a Quality Assurance Project Plan (QAPP) that describes specific Quality Assurance (QA) strategies that will be used when performing environmental data operations to support the objectives of this work assignment. The contractor shall write the QAPP using active voice, and shall ensure the QAPP provides enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered related to statistics about EPA's rulemaking pace.

- The type of data to be collected, generated, and used under this work assignment to support the project objectives—including data from search engines, federal databases, EPA data bases—as a well as a rationale for when those databases are appropriate and what data available in each will support the project.
- The quality objectives needed to ensure the data will support the project objectives, and
- The Quality Assurance and Quality Control (QA/QC) activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

## **Deliverables and schedule under Task 5**

**5a.** Within 15 days after submittal of the work plan, the contractor shall prepare and submit a QAPP. EPA will review the submitted QAPP and provide the contractor with written approval or comments within 15 days of receiving the Contractor's submission.

**5b.** If EPA requests changes, the contractor shall revise the submitted QAPP within 10 days of receipt EPA comments, unless otherwise instructed by the EPA WACOR.

**5c.** Review and compile accurate EPA regulatory statistical data compiled for calendar years 2006-2012 and create criteria for data inclusion or exclusion.

**5d.** Using new criteria, compile statistical data from regulatory data sources (including internal and external) for calendar years 2013-present.

**5e.** Review the ADP Reporting database tool for mechanisms to accurately capture future regulatory statistical data without relying on external data sources (e.g., the Government Printing Office or LexisNexis®).

## **Task 6 – Maintain existing regulatory internal and external web resources**

[Section III (E2. Contract Activity Information and Technology Requirements) of Contract EP-C-13-039 PWS]

ORPM maintains several external and internal websites that relate to regulatory analysis and development. When tasked, the contractor shall revise the following sites in a manner that complies with all EPA Web Standards and practices and that does not conflict with EPA staff who may also be posting on the same sites using Drupal or other EPA-approved web content management systems. Should the contractor produce graphics for the sites, the contractor shall provide source files to the WACOR as well as the final versions of the graphics. Should the contractor post Portable Document Format (PDF) documents to the sites, the contractor shall ensure the PDFs are compliant with Section 508 of the American with Disabilities Act. The contractor may assist ORPM in maintaining the following sites:

- **Laws and Regulations** (<http://www.epa.gov/laws-regulations>) – The public-facing Laws & Regulations site provides the public with general information about EPA's regulatory process

and the governing environmental and administrative statutes. It also serves as a portal to regulatory information related to specific regulations, topics and sectors. It currently resides on the "Laws & Regulations" area of EPA's Drupal web content management system. The contractor shall provide maintenance on the site, as requested by the WACOR, including:

- Checking for and correcting broken links quarterly.
- Updating text, revising graphics, or adding new features.
- **Actions Initiated by Month** (<http://www.epa.gov/laws-regulations/actions-initiated-month>) – The public-facing "Actions Initiated By Month" website contains monthly information about regulatory activity begun in EPA's primary rule writing offices. It contains more frequent updates to the public about new rulemaking activity than the agency's Semiannual Regulatory Agenda. The site resides on the "Laws & Regulations" area of EPA's Drupal web content management system. The contractor shall provide moderate maintenance on this site, as requested by the WACOR, including monthly updates to the page's content.
- **Small Entities and Rulemaking website** (<http://www.epa.gov/reg-flex/>) – The Regulatory Flexibility for Small Entities public website provides a portal to the Small Business Enforcement and Fairness Act (SBREFA) Panels conducted by the EPA's primary rule writing offices. The site resides on the "Regulatory Flexibility for Small Entities" area of EPA's Drupal web content management system. The contractor shall provide maintenance on the site, as requested by the WACOR.
- **Regulatory Development and Retrospective Review website** (<http://www.epa.gov/regdarrt/>) and associated Lotus Notes database – The Regulatory Development and Retrospective Review Tracker is a portal to the priority rulemakings produced by EPA's primary rule writing offices. The site is dynamically generated from a Lotus Notes database on the EPAHUB2 server (file name: RuleGate.nsf). The contractor shall provide moderate maintenance on Reg DaRRT.
- **ADP Library and Training Intranet** (<http://intranet.epa.gov/adplibrary/>) – ORPM's ADP Library Intranet site provides EPA's rule writers with templates, guidance, and self-paced training. The contractor shall provide moderate maintenance on this Intranet site, which resides on the "actiondp" on EPA's Time Sharing Services Management System (TSSMS). The contractor shall provide maintenance on the site as requested by the WACOR.
- **Action Development Process – Rulewriting at EPA** ([https://usepa.sharepoint.com/sites/OA\\_Community/adp\\_at\\_epa/SitePages/Home.aspx](https://usepa.sharepoint.com/sites/OA_Community/adp_at_epa/SitePages/Home.aspx)) – ORPM's SharePoint community site for rule writing tools that relate to the Action Development Process or that fall outside of the ADP in the broader rule development realm. The contractor shall provide development and maintenance on the site as requested by the WACOR.

## **Deliverables and schedule under Task 6**

**6a.** In accordance with One EPA Web directives, the contractor shall review internal and



external Web content for errors, as well as reviewing relative site server statistics.

**6b.** The contractor shall provide to the WACOR a report on broken links and recommend a corrected URL at the close of each quarterly review period.

**6c.** Within 7 days of approval from WACOR, make all broken link corrections from the reports emanating from 6a and 6b.

**6d.** Other deliverables required for Task 6 will be provided in technical direction from the WACOR. The contractor shall provide a schedule for these additional deliverables within 10 calendar days after receipt of technical direction.

### **Summary of Deliverables and Dates:**

The contractor shall provide the following specific deliverables to the EPA WACOR. All electronic documents shall be prepared in a format that is compatible with EPA software (e.g., MS Word, PDF, HTML).

	<b>DELIVERABLE</b>	<b>FORM AND QUANTITY</b>	<b>SCHEDULE</b>
<b>TASK 1</b>	<b>1a.</b> Work plan.	One document delivered in electronic format.	Within 15 calendar days of receipt of work assignment.
<b>TASK 2</b>	<b>2a.</b> Standardized naming convention and version control (SNCVC) memorandum	One document delivered in electronic format.	Within 7 calendar days of work plan approval.
	<b>2b.</b> If required, revised memorandum, at technical direction of EPA WACOR.	As requested by WACOR in written technical direction.	Within 3 calendar days of receipt of comments from the EPA WACOR.
<b>TASK 3</b>	<b>3a.</b> The beta ADP Reporting database, as developed under previously referenced contracts, shall be modified based on beta tester feedback and further WACOR specification.	Varied, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.
	<b>3b.</b> The contractor troubleshoot technical issues with the ADP TRACKER databases with the technical guidance of EPA.	Varied, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.



	<b>3c.</b> The contractor shall provide assistance with common development tasks, including customizable regulatory database reports, as requested by EPA WACOR.	Varied, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.
<b>TASK 4</b>	<b>4a.</b> The contractor shall develop and deliver regulation development training guides or materials.	Varied, as requested by WACOR in written technical direction.	Within 40 work days of the WACOR's request.
	<b>4b.</b> The contractor shall draft or revise user guides for the regulation tracking databases.	Primarily as Microsoft Word Portable Document Format (PDF) documents, but may vary, as requested by WACOR in written technical direction.	Within 30 work days of the WACOR's request.
	<b>4c.</b> The contractor shall recommend revisions to existing user guides and/or other resource documents.	Primarily as Microsoft Word or Portable Document Format (PDF) documents, but may vary, as requested by WACOR in written technical direction.	The WACOR will approve recommended changes.
<b>TASK 5</b>	<b>5a.</b> Draft Quality Assurance Project Plan (QAPP).	One document delivered in electronic format.	Within 15 calendar days after submittal of the workplan.
	<b>5b.</b> Revised QAPP.	One document delivered in electronic format.	Within ten days of receipt of comments from the Contracting Officer, if required.
	<b>5c.</b> Review and compile accurate EPA regulatory statistical data compiled for calendar years 2006-2012 and create criteria for data inclusion or exclusion.	Primarily as Microsoft Excel table documents, but may vary, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.
	<b>5d.</b> Compile statistical data from regulatory data sources for calendar years 2013-present.	Primarily as Microsoft Excel table documents, but may vary, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.

	<b>5e.</b> Modify the ADP Reporting database to capture future regulatory statistical data without relying on external data sources.	Varied, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.
<b>TASK 6</b>	<b>6a.</b> Following One EPA Web directives, the contractor shall review internal and external content for errors, as well as reviewing relative site server statistics.	Varied, as requested by WACOR in written technical direction.	Quarterly.
	<b>6b.</b> The contractor provide to the WACOR a report on broken links and recommend a corrected URL.	Varied, as requested by WACOR in written technical direction.	Quarterly.
	<b>6c.</b> Make all broken link corrections from the reports resulting from 6a and 6b.	As requested by WACOR in written technical direction.	Within 7 days of approval from WACOR.
	<b>6d.</b> Other deliverables required for Task 6 will be provided in technical direction from the WACOR.	Varied, as requested by WACOR in written technical direction.	As requested by the WACOR in written technical direction.

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1							
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Authorized Work Assignment Ceiling							
Contract Period:		Cost/Fee: \$0.00		LOE: 0			
09/11/2013 To 07/31/2017							
This Action:		\$137,198.00		1,127			
Total:		\$137,198.00		1,127			
Work Plan / Cost Estimate Approvals							
Contractor WP Dated: 08/30/2016		Cost/Fee \$137,198.00		LOE: 1,127			
Cumulative Approved:		Cost/Fee \$137,198.00		LOE: 1,127			
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<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Phone Number: 202-564-2855	
						FAX Number:	
Project Officer Name    Ahmar Siddiqui						Branch/Mail Code:	
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Phone Number: 202-566-1044	
						FAX Number:	
Other Agency Official Name						Branch/Mail Code:	
<div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Phone Number:	
						FAX Number:	
Contracting Official Name    Tammy Adams						Branch/Mail Code:	
<div style="display: flex; justify-content: space-between;"> <div> <b>TAMMY ADAMS</b>  <small>Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS,            dnQualifier=0000018417            Date: 2016.09.15 13:05:11 -0400</small> </div> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Phone Number: 513-487-2030	
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Contract Number EP-C-13-039		Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3		Title of Work Assignment/SF Site Name Perchlorate Rulemaking and CBX			
Contractor ABT ASSOCIATES INC.				Specify Section and paragraph of Contract SOW A.2			
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   08/01/2016   To   07/31/2017	
Comments: Performance on this Work Assignment shall not begin until August 1, 2016.							
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>							
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.							
SFO <input type="checkbox"/> (Max 2)							
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)    (Cents)    Site/Project (Max 8)    Cost Org/Code
1							
2							
3							
4							
5							
Authorized Work Assignment Ceiling							
Contract Period:		Cost/Fee:		LOE: 0			
09/11/2013 To 07/31/2017							
This Action:				5,590			
				5,590			
Total:				5,590			
Work Plan / Cost Estimate Approvals							
Contractor WP Dated:				Cost/Fee		LOE:	
Cumulative Approved:				Cost/Fee		LOE:	
Work Assignment Manager Name   Erik Helm						Branch/Mail Code:	
_____ (Signature)						Phone Number: 202-566-1049	
_____ (Date)						FAX Number:	
Project Officer Name   Ahmar Siddiqui						Branch/Mail Code:	
_____ (Signature)						Phone Number: 202-566-1044	
_____ (Date)						FAX Number:	
Other Agency Official Name						Branch/Mail Code:	
_____ (Signature)						Phone Number:	
_____ (Date)						FAX Number:	
Contracting Official Name   Tammy Adams						Branch/Mail Code:	
_____ (Signature)						Phone Number: 513-487-2030	
_____ (Date)						FAX Number: 513-487-2545	

Digitally signed by TAMMY ADAMS  
 DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY  
 ADAMS, dnQualifier=000018417  
 Date: 2016.07.28 07:08:21 -04'00'

## WORK ASSIGNMENT

**I. Title:** Perchlorate Rulemaking and SafeWater Model Support

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-32

**III. Estimated Period of Performance:** August 1, 2016 through July 31, 2017

**IV. Estimated Level of Effort:** 5590 hours

**V. Key EPA Personnel:**

**Work Assignment Contracting Officer Representative (WACOR):**

**Erik Helm**

OGWDW/SRMD (4607M)

202/566-1049

202/564-3758 (fax)

Helm.erik@epa.gov

**VI. Background and Purpose:**

### Perchlorate

Perchlorate is an inorganic ion ( $\text{ClO}_4^-$ ) occurring primarily as a salt. Perchlorate occurs naturally in calcium carbonate deposits in arid regions (e.g., parts of the western US) and via atmospheric processes. People are exposed to perchlorate through both food and drinking water. Perchlorate interferes with the thyroid gland by inhibiting iodide uptake. Reduced iodide uptake by the thyroid impacts the amount of thyroid hormones produced. Thyroid hormones are critical for normal growth and development. Poor iodide uptake and subsequent impairment of thyroid function in pregnant women are linked to delayed development and decreased learning capacity in infants and children.

On February 11, 2011 (76 FR 7762), the Environmental Protection Agency (EPA) announced its decision to regulate perchlorate based on its finding that perchlorate meets the Safe Drinking Water Act's (SDWA) three criteria for regulating a contaminant:

- Perchlorate may have adverse health effects,
- There is a substantial likelihood that perchlorate occurs with frequency at levels of health concern in public water systems, and
- There is a meaningful opportunity to reduce risk through a drinking water regulation.

In accordance with SDWA, the Agency requested EPA's Science Advisory Board (SAB) to review how to consider available data in deriving a Maximum Contaminant Level Goal (MCLG). The MCLG is a non-enforceable goal defined under the SDWA as "the level at which no known or anticipated adverse effects on the health of persons occur and which allows an

adequate margin of safety.” for a perchlorate National Primary Drinking Water Regulation. The SAB released its final report on May 29, 2013 and recommended that EPA “derive a perchlorate MCLG that addresses sensitive life stages through physiologically-based pharmacokinetic/pharmacodynamic (PBPK/PD) modeling.”

Food and Drug Administration (FDA) and EPA scientists developed a PBPK/PD model to determine under what conditions of iodine nutrition and exposure to perchlorate across sensitive lifestages would experience low serum free and total thyroxine (hypothyroxinemia).

EPA began the process of deriving a perchlorate MCLG by linking model output to information from literature to account for adverse health outcomes under WA 4-96 of Abt Contract EP-W-11-003 and WA 2-32 of Abt Contract EP-C-13-039. Under this work assignment the contractor shall continue to assist EPA in the development of the Perchlorate MCLG (not duplicating any work previously completed under WA 4-96 of contract EP-W-11-003 or WA 2-32 of contract EP-C-13-039) and the benefits and costs of the Perchlorate Rulemaking. In order to estimate the costs and benefits of the rule the contractor shall update EPA’s SafeWater modeling system (developed and updated under several previous contracts and work assignment ending with WA 2-32 of contract EP-C-13-039 – no previous work shall be duplicated under this WA) to include the dose response information that will be developed along with the Perchlorate MCLG calculations.

#### Lead and Copper Rule Long Term Rule Revision

Under the Safe Drinking Water Act (SDWA) EPA sets public health goals and enforceable standards for drinking water quality. The Lead and Copper Rule (LCR) is a treatment technique rule. Instead of setting a maximum contaminant level (MCL) for lead or copper, the rule requires public water systems (PWSs) to take certain actions to minimize lead and copper in drinking water, to reduce water corrosivity and prevent the leaching of these metals from the premise plumbing and drinking water distribution system components and when that isn’t enough, to remove lead service lines.

EPA is currently in the process of evaluating potential changes to the existing lead and copper rule. These regulatory changes may consist of modifications to the tiering criteria for lead and copper sampling sites, changes to requirements for lead service line replacement, changes and/or additions to existing corrosion control treatments, modifications to existing water quality parameters, public education requirements, and the determination of a health based lead tap sample threshold of concern referred to as the Household Action Level.

Under WA 2-32, an initial set of analyses was performed to calculate the drinking water concentration of lead resulting in the defined increase in the probability of elevated blood lead levels. Several iterations of this approach have been used with varying input parameters to investigate a health-based household action level. A number of additional analyses and approaches may be required based on changing regulatory requirements and EPA comments.

Under this work assignment the contractor shall conduct all analyses requiring the collection and manipulation of data and models in accordance with the EPA approved quality assurance (QA) project plan that will be based on Task 2 quality assurance project plan (QAPP) language. The

QAPP shall describe the procedures for assuring the quality of the primary and secondary environmental and economic data used for this work assignment.

## **VII. General Requirements of the Work Assignment and Schedule**

Confidential Business Information: During the course of the work assignment, the contractor will not be accessing and evaluating CBI.

Budget Reporting: The contractor under this work assignment is required to report to the EPA WACOR and Contract Level Contracting Officer Representative (CL-COR) when 75 percent of the total work assignment funding amount has been depleted. The contractor must also report to the EPA WACOR when 75 percent of the approved Workplan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor should refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA CL-COR, and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: The contractor shall be required to travel under this work assignment. Travel may be to participate with EPA in on site data collection, in meetings with trade associations, and to meet with EPA to discuss methodology and other important issues associated with the project. A request for approval for any travel directly chargeable to this work assignment must be submitted and approved by the CL-COR before travel begins.

Deliverable Formatting: All memos, draft comments, summaries and responses, and chapters are to be provided in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by EPA. Memos are to be written in a manner which will make them easy to turn into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the contractor shall use decimal align in all tables containing columns of numbers of

varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the EPA WACOR and will be formatted to be in compliance with the Section 508 Amendment to the Rehabilitation Act of 1973.

Quality Assurance: Tasks 3 through 5 in this Work Assignment (WA) require the use of secondary data. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor must prepare a complete Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. The contractor shall use the Project Specific Quality Assurance Project Plan (PQAPP) completed under task 2 of WA 2-32 for this purpose. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 1, below.

### **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the EPA WACOR's comments.

#### **Task 1 - Prepare Workplan**

The contractor shall prepare a workplan within 15 calendar days of receipt of the work assignment. The workplan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. The contractor shall use the Project Specific Quality Assurance Project Plan (PQAPP) completed under task 2 of WA 2-32, and ensure the quality of secondary data used to complete tasks 3 through 5.

The EPA WACOR, the CL-COR and the CO will review the workplan. However, only the CO can approve/disapprove, suggest revisions, or change the workplan. Official revisions will be given to the contractor by the Contracting Officer. The contractor shall prepare a revised workplan incorporating the Contracting Officer's comments, if required.

A weekly update call with the EPA WACOR and a monthly progress report will be required for this work assignment to discuss progress on deliverables, costs, and other potential issues.

The Monthly Progress Report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly reports must include a table with the invoice LOE and costs` broken out by the tasks.

#### **Deliverables and schedule under Task 1**



### **1.a. Workplan within 15 calendar days of receipt of work assignment.**

#### **Task 2 - Quality Assurance**

Tasks 3 through 5 in this work assignment require the use of secondary data. Collection, use, and analysis of data will be identical to the procedures described in the Project Specific Quality Assurance Project Plan (PQAPP), completed under task 2 of WA 2-32, consistent with the Agency's Quality Assurance requirements. EPA has determined that this approved PQAPP is appropriate for the tasks outlined in this Performance Work Statement. The work described for Tasks 3, 4, and 5 in this work assignment are covered by Task 2 in the original PQAPP (WA 2-32). Based on this determination, the contractor is not required to modify the approved PQAPP for this action. The project specific QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 1.

#### **Deliverables and schedule under Task 2**

None.

#### **Task 3 – Perchlorate Rule**

##### **Task 3.1 – Development of an MCLG for the Perchlorate Rule**

The contractor shall complete the development of the MCLG by linking PBPK/PD model outputs to adverse health outcome information developed as part of the literature review that was conducted under WA 4-96 of Contract EP-W-11-003 and WA 2-32 of contract EP-C-13-039. Under this work assignment, the contractor shall produce a memorandum assessing the variation in thyroid hormone levels throughout pregnancy and at what stages thyroid hormones insufficiency has the largest impact on fetus and childhood neurological development.

Based on the PBPK/PD model data, the literature review of health effect information, and the results of the assessment of thyroid hormone variability and effect in pregnancy, the contractor shall develop a memorandum characterizing a “meta-analysis” type approach for setting the MCLG. Once the EPA WACOR has commented on the approach for calculating the MCLG, the contractor shall develop a report documenting the complete MCLG development process.

The contractor shall prepare draft deliverable material for EPA WACOR review and approval.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

For planning purposes, assume that there will be three drafts of the MCLG report prior to the

final report.

### **Deliverables and schedule under Task 3.1**

**3.1.a. Drafts of the MCLG report due date to be determined (TBD) by written technical direction.**

**3.1.b. Final Drafts of all MCLG development documents due dates TBD by written technical direction.**

### **Task 3.2 – Development of new health and economic impact assessment methodologies for the Perchlorate Proposed Rule**

The contractor shall update the Perchlorate Notice of Proposed Rulemaking (NPRM) analyses completed under Contract EP-C-07-023, WAs 5-20 and 6-20. This work is to be done in preparation for the development of chapters of the technical support document (TSD) for the economic costs, impacts, and benefits of the proposed rulemaking (Task 3.4).

It may be necessary to make significant changes to the existing methodology or databases, and explore new types of analysis (i.e. changes to the economic benefits of the proposed rule that result from the development of the MCLG (Task 3.1 above). These changes may require major updates to the SafeWater model and or other health and economic analysis methodologies previously developed in WA 5-20 and 6-20. The exact nature and timing of these changes cannot be foreseen at this time. Making significant changes to existing methodology or databases or exploration of new lines of inquiry will follow the process outlined below:

- (1) The EPA WACOR will issue written technical direction to produce a short memorandum, table, or PowerPoint outlining the details of the new analysis required. The length of the document is expected to be less than 5 pages unless otherwise specified in the technical direction.
- (2) Once the EPA WACOR has reviewed the document and a determination is made as to whether to move forward with the changes to existing methods or data or conduct a new analysis (which would give additional insight into and not supplant the more general goals of the economic analysis outlined in this work assignment), the EPA WACOR will give written technical direction to the contractor on how to proceed. If it is decided that new work should be conducted then the technical direction will include any EPA changes to the contractor's proposed approach and specific deadlines for completion of the work.

Although a precise number of these potential significant changes to the existing NPRM methodology or databases, and/or explorations of new types of analysis cannot be given at this time, EPA expects that 3 significant changes to the existing methodology or databases, and new types of analysis will be required. The general time frame for the new analysis "scoping" deliverables will be on the order of 7 days after issuance of technical direction.

Under this task, the contractor shall conduct potential rule option assessments that will be used by EPA to determine the three to five primary regulatory options to be presented in the final economic TSD (Task 3.4). These scoping option assessment results should be reported to the EPA in tabular form, without a significant amount of written explanation and interpretation around the analysis results, unless otherwise requested by the EPA WACOR in written technical direction. The EPA WACOR will issue written technical direction specifying the options to be assessed and the completion date. The options to be assessed will be developed over time as part of the Agency's option selection, final agency review, and interagency review processes leading up to the proposed rule signature date. New options or changes to existing options may result from changes in the technical data, engineering analysis, and/or economic assessment methodology and, comments from Office of Water (OW) management, agency workgroup members, other federal agencies and Office of Management and Budget (OMB). Although a precise number of these option assessments cannot be given at this time, EPA expects the number to be between 5 and 10. For the purpose of estimating workplan costs assume that 25% of the option assessments will require turn around on the order of 7 days, the remaining 75% may be "quick response" deliverables particularly as we move through the Agency and Inter-agency review process.

Once the EPA WACOR reviews an option assessment, changes in the scope or methodology may be communicated through technical direction. The technical direction will also include a due date for the updated option assessment.

### **Deliverables and schedule under Task 3.2**

**3.2.a. Methodology and Data Modification Memorandum deliverables and due dates TBD by written technical direction. The contractor will normally be given 7 days or more to complete these deliverables.**

**3.2.b. EPA WACOR approved changes to Methodology and Data Modifications due dates TBD by written technical direction.**

**3.2.c. Planned Option Assessment deliverables and due dates TBD by written technical direction. The contractor will normally be given 7 days or more to complete these deliverables.**

**3.2.d. Quick Response Option Assessment deliverables and due dates TBD by written technical direction. The contractor will be given less than 7 days to complete these deliverables.**

### **Task 3.3 – Development of the Initial Regulatory Flexibility Analysis (IRFA) for the Perchlorate Proposed Rule**

The contractor shall prepare the Initial Regulatory Flexibility Analysis (IRFA) document for perchlorate regulation. The IRFA is an analysis that describes the anticipated economic impacts of proposed rules on small entities and any significant alternatives to the proposed rules that would accomplish the objectives of the rules while minimizing significant economic impacts on small entities.

The draft IRFA document will be provided to the EPA WACOR for an initial review.

Once the EPA WACOR completes the initial review of the draft IRFA document and provides revisions and/or comments to the contractor, the contractor shall incorporate the changes into the draft document and provide a final draft IRFA document to the EPA WACOR.

### **Deliverables and schedule under Task 3.3**

**3.3.a. Draft Perchlorate IRFA document due three months after workplan approval, unless delayed by written technical direction.**

**3.3.b. Final Perchlorate IRFA document is due within 2 calendar weeks of receipt of comments from the EPA WACOR, unless delayed by written technical direction.**

### **Task 3.4 – Development of the Draft Technical Support Document (TSD) for the Economic Costs, Impacts, and Benefits of the Perchlorate Proposed Rule**

Under this task, the contractor shall develop a draft Economic Analysis TSD. This report will revise the Baseline Analysis, Cost Analysis, and Benefits Analysis chapters of the NPRM Economic Analysis TSD written under WA 5-20 and 6-20 (EP-C-07-023). Drafts of the remaining chapters shall be written and submitted to the EPA WACOR for review. The chapter structure of the TSD shall remain the same as that developed in WA 5-20. The chapters of the economic analysis TSD will be:

- Executive Summary
- Need for the Rule
- Consideration of Regulatory Alternatives
- Baseline Analysis
- Health Effects
- Benefits Analysis
- Economic Impact and Cost Analysis
- Comparison of Benefits and Costs
- Administrative Requirements

The Administration Requirements chapter includes the Regulatory Flexibility Act (RFA) Analysis, the Unfunded Mandates Reform Act (UMRA) Analysis, and the Executive Order Analyses (E.O. 12866, 13132, 13175, 13045, 13211, 12898, and 13158).

The TSD will contain the assessment of the three to five proposed rule options which are to be determined through the EPA Office of Water proposed rule process. These primary options will be defined by written Technical Direction.

The draft TSD report chapters shall be provided to the EPA WACOR for an initial review.

Once the EPA WACOR completes the initial review of the draft TSD report chapters and

provides revisions and/or comments to the contractor, the contractor shall incorporate the changes into the draft TSD report chapters.

Under this task, the draft Economic Analysis TSD report chapters may also need to be revised further in response to public comments, changes in the technical data, comments from OW management, agency workgroup members, and OMB, as well as changes to the proposed rule regulatory options and/or technology efficacy results. These changes are expected to occur in several waves as the proposed rule moves through the Agency and Inter- agency review process. All changes will be given to the contractors by written Technical Direction. After each set of significant revisions initiated by technical direction, the contractor shall supply that portion or chapter of the TSD to the EPA WACOR for further review.

The Final Economic Analysis TSD report will be due at the time of the Administrator's Signature on the Proposed Perchlorate Rule, currently scheduled for March 2018, which is after the end of this work assignment's period of performance. Therefore, the contractor shall prepare final draft versions of the Economic Analysis TSD report chapters that have been drafted and modified during the period of performance, incorporating the EPA WACOR's comments at the end of the period of performance.

#### **Deliverables and schedule under Task 3.4**

**3.4.a. Second Drafts of the Baseline Analysis, Cost Analysis, and Benefits Analysis chapters due four months after workplan approval, unless delayed by written technical direction.**

**3.4.b. First Drafts of the remaining TSD chapters due dates TBD by written technical direction.**

**3.4.c. Final Draft Economic Analysis TSD chapters due date TBD by written technical direction.**

#### **Task 4 - Lead and Copper Rule (LCR)**

##### **Task 4.1 – Lead and Copper Long Term Revisions Rule Support**

The contractor shall, based on technical direction given by the EPA WACOR, provide technical support related to health risk assessment, and economic benefit assessment issues associated with the rulemaking. Such support may include responding to management questions about economic issues, preparing briefing and meeting materials (which may include but are not limited to short briefing documents and PowerPoint presentations). The contractor may also be requested to participate in and/or conduct briefings, assisting Agency economists in their review of analyses conducted by EPA and its contractors, providing technical review of materials prepared for the rulemaking by Agency staff, and assist in the development of the rulemaking record. For planning purposes, EPA expects that there will be a need for between 4 and 6 short briefing documents and the contractor shall participate in 1 to 2 briefings. The contractor may also be required to review and summarize 1 to 2 documents prepared by outside groups and/or other EPA offices.

The contractor shall prepare draft deliverable material for EPA WACOR review and approval.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

#### **Deliverables and schedule under Task 4.1**

**4.1.a. Draft deliverables and due dates TBD listed or delayed by written technical direction.**

**4.1.b. Final deliverable due dates listed or delayed by written technical direction.**

#### **Task 4.2 – Revisions to the Household Action Level (HAL) for the Lead and Copper Long Term Revisions Rule**

Under WA 2-32 the contractor developed a draft HAL report for the LCR. The contractor shall revise the report and supporting analysis based on technical direction given by the EPA WACOR. The EPA WACOR's technical direction may include the development of a number of additional methods for deriving the LCR's Household Action Level. The Household Action Level is a health based threshold level of concern. This value is being developed in response to the National Drinking Water Advisory Council's recommendations for the revision of the LCR. The Household Action Level will be a tap sample threshold value above which the public water utility will inform both the residents and local health department official that a site-specific assessment of lead exposure impacts to the residents is advisable. Additional updates to the Agency's Integrated Exposure Uptake Biokinetic (IEUBK) model maybe required as part of the updating of the HAL report and development of new HAL approaches. This work will require research into several exposure pathway lead concentrations. Because of the iterative approach to determining the drinking water concentration threshold it will be necessary to run the IEUBK model possibly more than a 100 times. If the EPA's Office of Research and Development (ORD) develops significant lead exposure information from their Stochastic Human Exposure and Dose Simulation (SHEDS) exposure model, in time to meet the household action level deadline, it may become necessary to link IEUBK to SHEDS this work would be done based on technical direction from the EPA WACOR.

For planning purposes, assume that there will be two drafts of the HAL report prior to the final report.

#### **Deliverables and schedule under Task 4.2**

**4.2.a. Additional drafts of the Household Action Level Report due date TBD based on EPA WACOR comments.**

**4.2.b. Final deliverable due dates listed or delayed by written technical direction.**

### **Task 4.3 – Development of new health and economic impact assessment methodologies for the Lead and Copper Long Term Revisions Rule**

This work is to be done in preparation for the development of chapters of the TSD for the economic costs, impacts, and benefits of the proposed rulemaking (Task 4.4).

It may be necessary to make significant changes to the existing methodology or databases, and explore new types of analysis (i.e. changes to the economic benefits of the proposed rule that result from the development of the Household Action Level (Task 4.2 above)). These changes may require major updates to the SafeWater model and or other health and economic analysis methodologies previously developed in WA 5-20 and 6-20. The exact nature and timing of these changes cannot be foreseen at this time. Making significant changes to existing methodology or databases or exploration of new lines of inquiry will follow the process outlined below:

1. The EPA WACOR will issue written technical direction to produce a short memorandum, table, or PowerPoint outlining the details of the new analysis required. The length of the document is expected to be less than 5 pages unless otherwise specified in the technical direction.
2. Once the EPA WACOR has reviewed the document and a determination is made as to whether to move forward with the changes to existing methods or data or conduct a new analysis (which would give additional insight into and not supplant the more general goals of the economic analysis outlined in this work assignment), the EPA WACOR will give written technical direction to the contractor. If it is decided that new work should be conducted then the technical direction will include any EPA changes to the contractor's proposed approach and specific deadlines for completion of the work.

Although a precise number of these potential significant changes to the existing NPRM methodology or databases, and/or explorations of new types of analysis cannot be given at this time, EPA expects that 3 significant changes to the existing methodology or databases, and new types of analysis will be required. The general time frame for the new analysis "scoping" deliverables will be on the order of 7 days after issuance of technical direction.

Under this task, the contractor shall conduct potential rule option assessments that will be used by EPA to determine the three to five primary regulatory options to be presented in the final economic TSD (Task 4.4). These scoping option assessment results should be reported to the EPA in tabular form, without a significant amount of written explanation and interpretation around the analysis results, unless otherwise requested by the EPA WACOR in written technical direction. The EPA WACOR will issue written technical direction specifying the options to be assessed and the completion date. The options to be assessed will be developed over time as part of the Agency's option selection, final agency review, and interagency review processes leading up to the proposed rule signature date. New options or changes to existing options may result from changes in the technical data, engineering analysis, and/or economic assessment methodology and, comments from OW management, agency workgroup members, other federal agencies and OMB. Although a precise number of these option assessments cannot be given at this time, EPA expects the number to be between 5 and 10. For the purpose of estimating workplan costs assume that 25% of the option assessments will require turn around on the order



of 7 days, the remaining 75% may be “quick response” deliverables particularly as we move through the Agency and Inter-agency review process.

Once the EPA WACOR reviews an option assessment, changes in the scope or methodology may be communicated through technical direction. The technical direction will also include a due date for the updated option assessment.

### **Deliverables and schedule under Task 4.3**

**4.3.a. Methodology and Data Modification Memorandum deliverables and due dates TBD by written technical direction. The contractor will normally be given 7 days or more to complete these deliverables.**

**4.3.b. EPA WACOR approved changes to Methodology and Data Modifications due dates TBD by written technical direction.**

**4.3.c. Planned Option Assessment deliverables and due dates TBD by written technical direction. The contractor will normally be given 7 days or more to complete these deliverables.**

**4.3.d. Quick Response Option Assessment deliverables and due dates TBD by written technical direction. The contractor will be given less than 7 days to complete these deliverables.**

### **Task 4.4 – Update the SafeWater Model to incorporate distribution system impact costs and lead child and adult benefits assessment**

The contractor shall, based on written technical direction from the EPA WACOR, continue the work started under WA 2-32 and update the SafeWater model to support rule cost components that occur in water utility distribution systems. The LCR will have regulatory options that might require proactive lead service line replacement and sampling at households. Previous versions of the SafeWater cost model looked only at entry point treatment costs. Alterations to the model must be made to allow for an assessment of costs that are not tied to entry point treatment. Additional modeled strata (e.g. systems with and without lead service lines) will also need to be added to the cost framework.

The contractor shall update the benefits model, based on written technical direction, to include appropriate lead dose response function information for child intelligence quotient (IQ) decrements and adult cardiovascular impacts. Additional health endpoint data may also become available based on work being conducted by EPA’s National Center for Environmental Economics. If new dose response relationships are developed, the EPA WACOR will give written technical direction to incorporate the additional health endpoint to the benefits analysis. At this time, EPA estimates that only one new endpoint will be developed.

For planning purposes, assume that there will be six drafts of the cost model prior to the final cost model, and four drafts of the benefits model prior to the final benefits model.



## **Deliverables and schedule under Task 4.4**

**4.4.a. Draft SafeWater cost model changes and due dates TBD listed or modified by written technical direction.**

**4.4.b. Final SafeWater cost model changes due dates listed or modified by written technical direction.**

**4.4.c. Draft SafeWater benefit model changes and due dates TBD listed or modified by written technical direction.**

**4.4.d. Final SafeWater benefit model changes due dates listed or modified by written technical direction.**

## **Task 4.5 – Development of Chapters of the Draft Technical Support Document for the Economic Costs, Impacts, and Benefits of the Lead and Copper Long Term Revisions Proposed Rule**

Under this task, the contractor shall develop chapters and sections of chapters for a draft Economic Analysis TSD. The chapters of the economic analysis TSD to be developed will be:

- Health Effects
- Benefits Analysis
- National Economic Impact and Cost Analysis
- Comparison of Benefits and Costs

Sections of the economic baseline chapter supporting the cost benefit work and the administrative requirements chapter will also need to be developed. The Administration Requirements chapter sections include the Regulatory Flexibility Act (RFA) Analysis, the Unfunded Mandates Reform Act (UMRA) Analysis, and the Executive Order 12866.

The TSD will contain the assessment of the three to five proposed rule options which are to be determined through the EPA Office of Water proposed rule process. These primary options will be defined by written Technical Direction.

The draft TSD report chapters and sections shall be provided to the EPA WACOR for an initial review.

Once the EPA WACOR completes the initial review of the draft TSD report chapters and sections and provides revisions and/or comments to the contractor, the contractor shall incorporate the changes into the draft TSD report chapters and sections.

Under this task, the draft Economic Analysis TSD report chapters and sections may also need to be revised further in response to public comments, changes in the technical data, comments from OW management, agency workgroup members, and OMB, as well as changes to the proposed rule regulatory options and/or technology efficacy results. These changes are expected to occur in several waves as the proposed rule moves through the Agency and Inter-agency review process. All changes will be given to the contractors by written Technical Direction. After each

set of significant revisions initiated by technical direction, the contractor shall supply that portion or chapter of the TSD to the EPA WACOR for further review.

The Final Economic Analysis TSD chapters sections will be due at the time of the Administrator's Signature or the Proposed Lead and Copper Long Term Rule Revision, currently scheduled for September 2017, which is after the end of this work assignment's period of performance. Therefore, the contractor shall prepare final draft versions of the Economic Analysis TSD report chapters that have been drafted and modified during the period of performance, incorporating the EPA WACOR's comments at the end of the period of performance.

#### **Deliverables and schedule under Task 4.5**

**4.5.a. Second Drafts of the Baseline Analysis, Cost Analysis, and Benefits Analysis chapters due four months after workplan approval, unless delayed by written technical direction.**

**4.5.b. First Drafts of the remaining TSD chapters due dates TBD by written technical direction.**

**4.5.c. Final Draft Economic Analysis TSD chapters due date TBD by written technical direction.**

#### **Task 5 - Provide Technical Support for Rulemaking Activities**

The contractor shall provide technical support related to health assessment, and economic cost and benefit assessment issues associated with the Perchlorate, Lead and Copper, Carcinogenic Volatile Organic Compounds, and Fluoride rulemakings. Such support may include conducting SafeWater runs, developing regulatory flexibility analysis (RFA) reports, developing health effects documents, responding to management questions about economic and health impact issues, preparing briefing and meeting materials (which may include but are not limited to short briefing documents, PowerPoint presentations, and memoranda). The contractor may also be requested to participate in and/or conduct briefings, assisting Agency economists in their review of analyses conducted by EPA and its contractors, providing technical review of materials prepared for the rulemaking by Agency staff, and assist in the development of the rulemaking record.

The contractor shall prepare draft deliverable material for EPA WACOR review and approval.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

For planning purposes, assume 15 quick turnaround tasks that would include document review and summarizing, single spreadsheets, and bulleted memos, and 5 tasks that have longer timeframes to complete which would include long memos and multipage spreadsheets.

## **Deliverables and schedule under Task 5**

- 5.a. Draft deliverables and due dates TBD listed or modified by written technical direction.**
- 5.b. Final deliverable due dates listed or modified by written technical direction.**

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-32				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3			Title of Work Assignment/SF Site Name Perchlorate Rulemaking and Saf				
Contractor ABT ASSOCIATES INC.					Specify Section and paragraph of Contract SOW A.2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval						Period of Performance  From   08/01/2016   To   07/31/2017				
Comments:										
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee: \$0.00		LOE: 0						
09/11/2013 To 07/31/2017										
This Action:		\$674,278.00		5,590						
Total:		\$674,278.00		5,590						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated: 08/17/2016		Cost/Fee \$674,278.00		LOE: 5,590						
Cumulative Approved:		Cost/Fee \$674,278.00		LOE: 5,590						
Work Assignment Manager Name Erik Helm  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1049 FAX Number:				
Project Officer Name Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1044 FAX Number:				
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:				
Contracting Official Name Tammy Adams <div style="display: flex; justify-content: space-between;"> <div> <b>TAMMY ADAMS</b>            Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS, dnQualifier=0000018417            Date: 2016.08.29 11:20:18 -04'00'         </div> <div>_____ (Signature)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2030 FAX Number: 513-487-2545				

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 3-32								
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001								
Contract Number EP-C-13-039	Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number      3	Title of Work Assignment/SF Site Name Perchlorate Rulemaking and Saf								
Contractor ABT ASSOCIATES INC.		Specify Section and paragraph of Contract SOW A.2								
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From   09/15/2016   To   07/31/2017								
Comments: Amendment 1 modifying Task 3.1 and adding to new tasks 4.6 and 6. A work plan is required per the contract requirements.										
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE: 5,590						
09/11/2013 To 07/31/2017										
This Action:				1,860						
Total:				7,450						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee				LOE:		
Cumulative Approved:				Cost/Fee				LOE:		
Work Assignment Manager Name   Erik Helm							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Project Officer Name   Ahmar Siddiqui							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Other Agency Official Name							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Contracting Official Name   Tammy Adams							Branch/Mail Code:			
_____ (Signature)							_____ (Date)			
Digitally signed by TAMMY ADAMS DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS, dnQualifier=0000018417 Date: 2016.09.15 16:28:39 -04'00'							Phone Number: 202-566-1049			
							FAX Number:			
							Branch/Mail Code:			
							Phone Number: 202-566-1044			
							FAX Number:			
							Branch/Mail Code:			
							Phone Number:			
							FAX Number:			
							Branch/Mail Code:			
							Phone Number: 513-487-2030			
							FAX Number: 513-487-2545			

**WORK ASSIGNMENT  
Amendment No. 1**

**I. Title:** Perchlorate Rulemaking and SafeWater Model Support

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-32

**III. Estimated Period of Performance:** Date of Issuance through July 31, 2017

**IV. Estimated Level of Effort:** 1860 hours

**V. Key EPA Personnel:**

**Work Assignment Contracting Officer's Representative (WACOR):**

**Erik Helm**

OGWDW/SRMD (4607M)

202/566-1049

202/564-3758 (fax)

helm.erik@epa.gov

**VI. Background and Purpose:**

This amendment (No. 1) adds additional level of effort to Task 3.1 in support of the Environmental Protection Agency's (EPA's) activities related to the regulation of Perchlorate in drinking water. The Maximum Contaminant Level Goal (MCLG) Report that was drafted under Work Assignment (WA) 2-32 and previously under this work assignment must be expanded to include a number of differing methodologies for calculating a perchlorate MCLG.

This amendment also adds two new tasks to this work assignment that support the Office of Ground Water and Drinking Water's lead regulatory efforts. Task 4.6 looks to assess the negative environmental impact from mandating that systems with lead service lines add orthophosphate to the drinking water. Phosphates are nutrients that can pass through wastewater treatment plants and cause negative environmental impacts like harmful algal blooms (HABs). Task 6 relates to the Agency's Lead Free regulation, which implements Section 1417 of the Safe Drinking Water Act: Prohibition on Use of Lead Pipes, Solder, and Flux. Because of the additional small business definitions being considered as part of the Lead Free rulemaking and specifically how those definitional changes relate to self or third party certify of lead free products, additional analysis and revisions to previously prepared models and documentation must be conducted in under Task 6.

EPA estimates that, for this Amendment, 1860 additional professional hours will be required to complete Tasks 3.1, 4.6, and 6 as outlined in this Performance Work Statement. With no additional

hours added to the other tasks the total professional hours are projected to be 7450 (5590 base WA + 1860 incremental for Amendment 1).

The current approved Quality Assurance Project Plan (QAPP) is applicable to the additional task requirements in this amendment.

## **VII. Performance Work Statement**

### **Task 3.1 is being revised as follows:**

#### **Task 3.1 – Development of an MCLG for the Perchlorate Rule**

The contractor shall complete the development of the MCLG by linking Physiologically based pharmacokinetic and pharmacodynamic (PBPK/PD) model outputs to adverse health outcome information developed as part of the literature review that was conducted under WA 4-96 of Contract EP-W-11-003 and WA 2-32 of contract EP-C-13-039. Under this work assignment, the contractor shall produce a memorandum assessing the variation in thyroid hormone levels throughout pregnancy and at what stages thyroid hormones insufficiency has the largest impact on fetus and childhood neurological development.

Based on the PBPK/PD model data, the literature review of health effect information, and the results of the assessment of thyroid hormone variability and effect in pregnancy, the contractor shall develop a memorandum characterizing a “meta-analysis” type approach for setting the MCLG. Once the EPA WACOR has commented on the approach for calculating the MCLG, the contractor shall develop a report documenting the complete MCLG development process.

Based on significant input on the draft MCLG methodology and report that was previously completed under the current work assignment significant edits to the MCLG draft report will be necessary and update to the supporting model spreadsheets are required. The report will now present 4 or more alternative methodologies for the derivation of an MCLG falling into two categories neurodevelopmental endpoint impacts and change in hypothyroxinemic populations.

The contractor shall prepare revised draft deliverable material for EPA WACOR review and approval.

Once the EPA WACOR reviews the revised draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

For planning purposes, assume that there will be four additional drafts of the MCLG report, which includes multiple approaches prior to the final report and supporting model spreadsheets will have to be updated twice per draft report.

#### **Deliverables and schedule under Task 3.1**

**3.1.a. Drafts of the MCLG report and supporting models due date to be determined (TBD) by written technical direction.**

**3.1.b. Final Drafts of all MCLG development documents and models due dates TBD by written technical direction.**

**Tasks 4.6 and 6 are being added to the WA:**

**Task 4.6 – Evaluate changing nutrient loads from corrosion control on wastewater treatment and receiving water bodies**

Under the Lead and Copper Rule (LCR), EPA requires large water systems to use corrosion control treatments for drinking water. Orthophosphate is a corrosion inhibitor that is generally used by these systems. Under the long-term revisions to the LCR, EPA is considering expanding the requirement for corrosion control treatment to medium and/or small systems that have not previously installed corrosion control treatment, which could substantially increase the amount of phosphorus that flows into wastewater treatment plants, and thus to receiving water bodies. Discharge from wastewater treatment facilities, with little to no treatment for phosphorus, is already a significant source of nutrient loading in surface waters throughout the country, in part because only certain regions have National Pollution Discharge Elimination (NPDES) permitting limits for total phosphorus.

Under this task, the contractor shall evaluate the potential impacts to Waste Water Treatment Plants (WWTP) for phosphorous removal and discharges from WWTPs to receiving water bodies under a set of LCR regulatory assumptions that the EPA WACOR will supply to the contractor. As part of this analysis, the contractor shall:

- Identify those areas that do not currently have NPDES limits for total phosphorus but are likely to be candidates for limits or increased monitoring of total phosphorus.
- Identify areas in which receiving waters from WWTP are likely to see substantial increases in phosphorus loads;
- Discuss the potential environmental impacts of additional phosphorus contribution to receiving water bodies; and
- Identify metropolitan areas that are unlikely to be able to meet NPDES permit limitations for nutrients/total phosphorus based on the assumptions provided by EPA.
- Analyze the economic costs of any environmental harm to receiving bodies, given changes in nutrient loading that can be identified by proposed rule requirements.

Once the EPA WACOR has commented on the approaches and models to be developed for assessing the impact of the nutrients, the contractor shall develop a draft report documenting the complete nutrient assessment process.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

For planning purposes, assume that there will be three drafts of the nutrient impact assessment



report prior to the final report.

#### **Deliverables and schedule under Task 4.6**

**4.6.a. Drafts of the Nutrient Impact Assessment Report due date TBD based on EPA WACOR comments.**

**4.6.b. Final Nutrient Impact Assessment Report deliverable due dates listed or delayed by written technical direction.**

#### **Task 6 - Provide Regulatory Flexibility Act (RFA) Technical Support for the Lead Free Rulemaking**

The contractor shall update and revise the Lead Free RFA analysis that was conducted under WA 2-32 of this contract. As a result of guidance and comment given during the option selection process the current RFA analysis must be updated to include assessment of revenue impacts for different definitions of small entities under the rule. The definition of small entities incurring third party and self-certification costs will vary across North American Industry Classification System (NAICS) codes. Also an assessment of impact will be conducted based on product complexity requirements for third party and self-certification.

The contractor shall prepare draft deliverable spreadsheets for EPA WACOR review and approval.

Once the EPA WACOR reviews the draft spreadsheets and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the spreadsheets incorporating the EPA WACOR's comments.

Given final versions of the spreadsheets, the contractor shall revise the RFA report that was developed under WA 2-32 of this contract. The draft revised report shall be delivered to the EPA WACOR for review and approval.

Once the EPA WACOR reviews the draft report and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the report incorporating the EPA WACOR's comments.

For planning purposes, assume 3 sets of small business/product complexity definitions to be assessed. The contractor should assume three iterations on the spreadsheets: 2 drafts and 1 final draft. For the report, assume one draft and one final draft report.

#### **Deliverables and schedule under Task 6**

**6.a. Draft RFA spreadsheet model changes and due dates TBD listed or modified by written technical direction.**


**6.b. Final RFA spreadsheet model changes due date listed or modified by written technical direction.**

**6.c. Draft revised RFA report due dates TBD listed or modified by written technical direction.**

**6.d. Final RFA report due date listed or modified by written technical direction.**

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-32				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3			Title of Work Assignment/SF Site Name Perchlorate Rulemaking and Saf				
Contractor ABT ASSOCIATES INC.					Specify Section and paragraph of Contract SOW A.2					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval						Period of Performance  From   09/15/2016   To   07/31/2017				
Comments:										
<input type="checkbox"/> Superfund    Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee: \$674,278.00			LOE: 5590					
09/11/2013 To 07/31/2017										
This Action:		\$216,803.00			1,860					
Total:		\$891,081.00			7,450					
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:		10/07/2016			Cost/Fee \$216,803.00			LOE: 1,860		
Cumulative Approved:					Cost/Fee \$891,081.00			LOE: 7,450		
Work Assignment Manager Name Erik Helm							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> <span>(Signature)</span> <span>(Date)</span> </div>							Phone Number: 202-566-1049			
							FAX Number:			
Project Officer Name Ahmar Siddiqui							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> <span>(Signature)</span> <span>(Date)</span> </div>							Phone Number: 202-566-1044			
							FAX Number:			
Other Agency Official Name							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> <span>(Signature)</span> <span>(Date)</span> </div>							Phone Number:			
							FAX Number:			
Contracting Official Name Tammy Adams							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"> <span>(Signature)</span> <span>(Date)</span> </div>							Phone Number: 513-487-2030			
							FAX Number: 513-487-2545			

Digitally signed by TAMMY ADAMS  
 DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY  
 ADAMS, dnQualifier=0000018417  
 Date: 2016.10.25 06:35:58 -0400

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-34	
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:	
Contract Number EP-C-13-039		Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3		Title of Work Assignment/SF Site Name Oil Program Tech & Reg Support			
Contractor ABT ASSOCIATES INC.				Specify Section and paragraph of Contract SOW Tasks A, C & D			
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval						Period of Performance  From   08/01/2016   To   07/31/2017	
Comments: Performance on this Work Assignment shall not begin until August 1, 2016.							
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>							
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.							
SFO <input type="checkbox"/> (Max 2)							
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)    (Cents)    Site/Project (Max 8)    Cost Org/Code
1							
2							
3							
4							
5							
Authorized Work Assignment Ceiling							
Contract Period:		Cost/Fee:		LOE: 0			
09/11/2013 To 07/31/2017							
This Action:				673			
				673			
Total:				673			
Work Plan / Cost Estimate Approvals							
Contractor WP Dated:		Cost/Fee		LOE:			
Cumulative Approved:		Cost/Fee		LOE:			
Work Assignment Manager Name   Mark W. Howard  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-564-1964 FAX Number:	
Project Officer Name   Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1044 FAX Number:	
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:	
Contracting Official Name   Tammy Adams <div style="display: flex; justify-content: space-between;"> <div>  </div> <div> <small>Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff,            cn=TAMMY ADAMS, dnQualifier=0000018417            Date: 2016.07.21 17:26:25 -04'00'</small> </div> </div> <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2030 FAX Number: 513-487-2545	

## **PERFORMANCE WORK STATEMENT**

**I. Title:** Oil Program Regulatory and Technical Support

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-34

**III. Estimated Period of Performance:** August 1, 2016 through July 31, 2017

**IV. Estimated Level of Effort:** 673

**V. Key EPA Personnel:**

**Work Assignment Contracting Officer's Representative (WACOR):**

**Mark W. Howard**

OEM/RID (5104A)

202/564-1964

202/566-1053 (fax)

**VI. Background and Purpose:**

The EPA Office of Emergency Management (OEM), an office under the Office of Land and Emergency Management (OLEM) is responsible for implementing the Spill Prevention, Control, and Countermeasure (SPCC) and Facility Response Plan (FRP) programs under section 311 of the Clean Water Act (CWA) as amended by the Oil Pollution Act (OPA or OPA 90). OEM's work includes amending current regulatory requirements, developing new regulatory proposals, drafting guidance/policy/training and implementing the oil inspection program.

The Work Assignment is intended to provide funding and hours for the technical support of development of regulations, guidance, policy and training pertaining to oil pollution prevention and preparedness regulations (40 CFR Part 112, including the SPCC and FRP regulations). This work assignment also addresses needs for program implementation, oil program training, technical outreach and the other oil program activities. Contractor support is immediately necessary to meet the requirements of future rulemaking and policy efforts for the oil program possibly under an extremely ambitious schedule, set by law from Congress.

**VII. General Requirements of the Work Assignment and Schedule**

Budget Reporting: The contractor under this work assignment is required to report to the EPA WACOR and Contract Level Contracting Officer's Representative (CL-COR) when 75 percent

of the total work assignment funding amount has been depleted. The contractor must also report to the EPA WACOR when 75 percent of the approved Work plan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor should refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA CL-COR, and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: The contractor shall be required to travel under this work assignment. Travel may be to participate with EPA in on-site training/meeting support/outreach support. A request for approval for any travel directly chargeable to this work assignment must be submitted and approved by the CL-COR before travel begins.

Deliverable Formatting: All memos, draft comments, summaries and responses, and chapters are to be provided in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by EPA. Memos are to be written in a manner which will make them easy to turn into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the contractor shall use decimal align in all tables containing columns of numbers of varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the EPA WACOR and will be formatted to be in compliance with the Section 508 Amendment to the Rehabilitation Act of 1973. The contractor shall maintain a copy of all deliverables and drafts presented to the WACOR, and shall deliver a copy these documents within two weeks of closure of the Work assignment.

## **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the

EPA WACOR's comments.

### **Task 1 - Prepare Workplan and QAPP**

- a. **Workplan**-The contractor shall prepare a workplan within **15 calendar days** of receipt of the work assignment. The work plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, **a detailed cost estimate by task**, and a staffing plan. The EPA WACOR, the CL-COR and the CO will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised work plan incorporating the CO's comments, if required.
- b. **Quality Assurance**-Quality Assurance Project Plans (QAPP) are required under the Agency's Quality Assurance Policy CIO-2105, formerly EPA Order 5360.1A2 and implementing guidance CIO-2105-P-OI-0. All projects that involve the generation, collection, analysis and use of environmental data must have an approved QAPP prior to the commencement of the work. The Contractor has previously prepared a contract-wide Programmatic QAPP (PQAPP) for Contract EP-C-13-039. This PQAPP describes, in a single document, information that is not site or time-specific, but applies throughout the program (i.e., the duration of the contract) to the breadth of tasks anticipated to fall within the scope of the contract, notably economic and environmental analyses to support rulemaking. EPA reviewed and approved the PQAPP. The PQAPP addresses the quality assurance (QA) requirements salient to the gathering, evaluation, analysis, and use of existing environmental data and will similarly apply to regulatory analyses conducted under this assignment. To the extent that this PQAPP does not address some objectives, data, or procedures specific to this work assignment (e.g., data sources used to characterize the universe of oil storage facilities regulated under 40 CFR part 112), these project-specific requirements will need to be addressed in a supplemental QAPP (SQAPP) to complement the PQAPP.

#### *QA Project Plan Requirements*

EPA policy requires that an approved QAPP be in place before any work begins that involves the collection, generation, evaluation, analysis or use of environmental data. The work to be performed by the Contractor under this work assignment involves such activities; in order to comply with this requirement:

- The contractor shall prepare and submit a SQAPP documenting how QA and quality control (QC) will be applied to the generation, collection, evaluation, analysis and use of environmental data within 15 days after submittal of the work plan.
- EPA will review the submitted SQAPP and provide the Contractor with written approval or comments within 15 days of receiving the Contractor's submission.
- The Contractor shall revise the submitted SQAPP within 10 days of receipt, unless otherwise instructed by the EPA WACOR.
- The contractor shall not perform work that involves the generation, collection,

evaluation, analysis, or use of environmental data without an approved QAPP in place 50 days after submission of the Contractor's work plan.

- Under no circumstances shall field sampling or laboratory analysis activities be conducted prior to receipt of an approved work plan.
- Any non-sampling/non-analytical work performed by the contractor that involves the generation, collection, evaluation, analysis, or use of environmental data that is initiated prior to approval of the Contractor's SQAPP must be performed in accordance with the approved QAPP. The QAPP requirements must be applied retroactively to this period that lasts no more than 50 days from submission of the Contractor's work plan.

The contractor shall write the SQAPP using the active voice. The SQAPP shall address the generation (including field studies, laboratory studies, and modeling output), collection (including surveys, literature searches, and third party data), evaluation (including data inspection, review, assessment, and validation), analysis (including statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models) and use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, methods, criteria, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs).

Examples of data include, but are not limited to, Oil Program, farms and SPCC plan development/implementation costs to support the Economic Analysis for the rule, economic questionnaire data, economic data, use of models, secondary data (including sources and the acceptance criteria), any software and database management requirements and any other relevant work that might affect the quality of the data.

Note that QAPPs are also required for the development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. For example, when existing models are used as a tool to generate or evaluate data, the project SQAPP must describe the model, how it will be used, and how the model output will be evaluated to ensure it meets the overall quality objectives for the project. However, development or revision of new models also must be supported by a QAPP that describes the objectives for the model, the quality criteria that will be applied to the model, and the procedures for evaluating whether the model meets those criteria.

The SQAPP shall provide enough detail to clearly describe objectives of the project supported by the work assignment; the type of data to be collected, generated, or used under this work assignment to support the project objectives; the quality objectives needed to ensure that these will support the project objectives; and the quality assurance and quality control activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed. The SQAPP shall include specific performance criteria and measures that will be used to verify that data generated, collected or used in this work assignment meet those criteria. If a database or other electronic tool (e.g., model, spreadsheet, etc.) will be created for the project, the SQAPP must describe how the database or electronic tool will be documented



(e.g., data element dictionary, user manual, Standard Operating Procedure (SOP), or other means appropriate for the project), the controls to ensure accurate data entry (when data from another source are manually entered into the database), data transfer (when data are transferred from one electronic medium to another), or data merging (when data from multiple databases or electronic media are merged into a single database). The text of the SQAPP also must explicitly reference tools, such as SOPs, checklists, and guidelines that the contractor will use in the project to document data quality. The SQAPP must include the tools as attachments for EPA's review, and acceptance.

When preparing the SQAPP, the Contractor shall address the following general questions applicable to all QAPPs. These questions may be directly addressed within the format of the SQAPP to the maximum extent possible, and/or may be addressed in a separate section or addendum to the Quality Management Plan (QMP).

General Questions Applicable to all QAPPs that support all projects

- What is the objective/goal of this effort?
- What are the roles and responsibilities of staff who will support this project, and how to they relate to the specific key steps?
- What training and competency requirements are necessary for key personnel that will support the project?
- If models will be used to support the project, what are these models, why have they been selected, and how will they be validated, documented and used?
- What are the SOPs, tools and checklists that will be used?

#### Data Quality Act/Information Quality Guidelines Requirements

The Data Quality Act (also known as the Information Quality Act) requires EPA to ensure that influential information disseminated by the Agency is sufficiently transparent in terms of data and methods of analysis that the information is capable of being substantially reproduced. To support compliance with these data transparency/data reproducibility requirements, EPA plans to include QAPPs as part of any rulemaking record documentation to be made available to the public. The Contractor may claim information in QAPPs as confidential; if the Contractor chooses to do so, the Contractor shall submit a sanitized (i.e., public) version and an unsanitized (i.e., confidential) version at the time the QAPP is submitted for approval by EPA. The sanitized version will be included in the public docket for the applicable rulemaking (or other docket or record), and the unsanitized version will be included in a non-public (i.e., confidential) portion of the docket (or record).

Information contained in the approved SQAPP must be transparent and reproducible and meet the requirements of the Data Quality Act for influential information. EPA's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency (EPA/260R-02-008, October 2002), referred to as "EPA's Information Quality Guidelines," describe EPA procedures for meeting Data Quality Act requirements. Section 6.3 of EPA's Information

Quality Guidelines indicate that "especially rigorous robustness checks" should be applied in circumstances where quality-related information cannot be disclosed due to confidentiality issues. Where applicable, the Contractor shall indicate which results were obtained using the tools (SOPs, checklists, and guidelines) that the Contractor designates as confidential so that the EPA WACOR can easily identify the areas that will require rigorous robustness checks and document that those checks have been performed. At the discretion of the EPA WACOR, the Contractors may be requested to prepare pre-dissemination review checklist as described in Section 5.5 of the Office of Water Quality Management Plan, February 2009. If this is required, the EPA WACOR will notify the Contractor through written technical direction.

#### Additional QA Documentation Required

In addition to the SQAPP requirements described above, all major deliverables (e.g., Technical Support Documents, Study Reports, Study Plans, etc.) produced by the Contractor under this work assignments must include a discussion of the QA/QC activities that were or will be performed to support the deliverable. For example, a Technical Support Document or Study Report must include a clear discussion of the quality management strategies that were employed to control and document the quality of data generated and used.

The contractor also shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the SQAPP, and corrective actions taken. If desired, the contractor may include this as a part of the contract-required monthly financial/technical progress report.

#### **Deliverables and schedule under Task 1**

##### **1a. Workplan within 15 calendar days of receipt of work assignment.**

##### **1b.**

- **SQAPP within 15 days after submittal of the Contractor's work plan.**
- **If required by the EPA WACOR, the contractor shall revise the plan within 10 days of receipt of comments from the EPA WACOR, or as otherwise requested by the EPA WACOR**
- a. **Monthly reports of QA work performed (may be included in the Contractor's monthly progress report.)**

#### **Task 2 – Economic, Regulatory and Technical Support for Rulemaking (Contract EP-C-13-039, PWS Tasks A, C)**

OEM will task the contractor to conduct the following activities in support of SPCC, FRP or other rulemaking associated with revising the requirements applicable to farms or other changes:

- a. Data Analysis**—The contractor shall conduct research and provide data analysis in support of the SPCC Farm rulemaking action. The research and data analysis tasks will generally be driven by questions from the regulatory workgroup and therefore will often be tied to the activities of the workgroup which meets approximately once per month. Issues may include, but are not limited to, characteristics of regulated industries and facilities, industry standards, costs, environmental impacts, and spill prevention benefits. Analyses may require the collection of existing data from internal agency and/or external contacts, including other federal agencies, state and local personnel, industry groups, environmental groups, etc., as requested by the WACOR in a Technical Directive (TD). Any information submitted directly to the contractor shall be copied and sent to OEM. The issues of focus for these analyses and/or data collections will be specified by the WACOR in a TD. Upon receipt of a TD, the contractor shall provide including memorandum describing the proposed approach for carrying out the data analysis an estimate of the Level of Effort for the specific analysis task to the WACOR **no later than 5 days after receiving a TD**. After discussion of the approach and level of effort with the WACOR, the contractor shall proceed with the analysis and provide a summary of findings.

**Deliverables:**

**One memorandum describing the proposed approach for the analysis and estimated level of effort within 5 days of receiving a TD from the EPA WACOR.**

**Summary of analysis findings one week prior to regulatory workgroup meeting or as requested by the WACOR in a TD. Summary of findings shall be revised within three days of receipt of the WACOR's comments, but not later than one week before the next scheduled meeting.**

**It is estimated that 5 summary of analysis findings documents will need to be drafted during the period of performance of this assignment.**

- b. ICRs**—The SPCC and FRP regulations both have existing Information Collection Requests (ICRs) that cover the submittal of information to EPA by regulated facilities. If requested by the EPA WACOR in a TD, the contractor shall assist in developing new and/or revising existing ICRs. The extent and timing of the work under this task will depend on each ICR's cycle. The WACOR will provide specific schedules to the contractor through a TD when the ICRs need to be developed or updated. The contractor shall also prepare ICRs for proposed and final rulemakings as requested by the WACOR. The ICR process has begun with the Office of Management and Budget (OMB) and this task was worked in in the previous WA 2-34 of this contract.

**Deliverables:**

**The contractor shall prepare and support the preparation of ICRs for proposed and final rulemakings by dates provided by the WACOR in forthcoming TDs.**

**For revisions to an existing ICR, expected deadline is within two weeks of receiving a TD. Any subsequent revisions shall be completed within one week of receiving comments from the WACOR.**

**It is estimated that 2 draft ICR documents and 1 final ICR document will need to be drafted during the period of performance of this assignment.**

- c. Technical Support Documents**—The contractor shall develop and/or amend technical background documents and other relevant materials that support the development of the regulatory action. The WACOR will provide the contractor with the scope, direction and schedule for technical documents through a TD.

**Deliverables:**

**The contractor shall prepare draft technical documents within 14 days of receiving TD from the WACOR or by other dates provided by the WACOR in forthcoming TDs.**

**The contractor shall provide final drafts of technical documents within 7 days after receiving comments from the WACOR.**

**It is estimated that 10 technical documents will need to be drafted in support the farm rule making action. Technical documents will typically be limited to about ten pages.**

- d. Preamble Language**—Based on regulatory workgroup direction, the contractor shall assist in drafting preamble language as part of the regulatory review process. The regulatory development support schedule and requirements for any future SPCC or FRP proposed rule action will be provided to the contractor once the range and complexity of issues are identified. The WACOR will provide the contractor with specific format and content directions through a TD. The contractor shall incorporate comments and decisions from the regulatory workgroup, other EPA offices, and other U.S. government agencies, including but not limited to the Department of Transportation (DOT), the Bureau of Safety and Environmental Enforcement (BSEE), and OMB during the regulatory development process, as requested by the WACOR.

**Deliverables:**

**EPA expects multiple rounds of drafting and revisions for the preamble. The contractor is expected to use the most current templates for preamble drafting.**

**Drafts of the preamble will generally be due one week prior to regulatory workgroup meeting or as requested by the WACOR in a TD. Revisions to these documents shall be made within five days of receipt of the WACOR's comments.**

**Revisions from the concurrence process shall be made two weeks prior to Office Land and Emergency Management (OLEM) signoff. The contractor will be**

**provided with documents edited during the concurrence process. Revisions to these documents shall be made within five days of receipt of the WACOR's comments.**

**Any revisions following the OLEM signoff process shall be submitted one month prior to when Administrator approval is expected.**

**A final draft of the full farm rule preamble will be completed within 90 days of the work plan approval or by other date provided by the WACOR.**

**It is estimated that 3 drafts and 1 final preamble document will need to be drafted during the period of performance of this assignment.**

- e. Economic Analyses**—The contractor shall prepare and/or revise Economic Analyses (EA) as required under Executive Order 12866 (or other equivalent cost/benefit or economic and financial analysis document that describes the level of analysis for the regulatory action), and other relevant material required for rulemaking. This analysis may require the collection of existing data from public sources or through discussion with internal Agency and/or external contacts, including other Federal agencies, State and local personnel, industry groups, environmental groups, etc., as requested in a TD. Discussions to gather information shall be conducted locally or by telephone. The economic analysis shall be prepared in accordance with the most current Federal requirements and Agency guidelines.

**Deliverables:**

**The contractor shall submit economic analysis documents to the WACOR three weeks prior to the regulatory review process in the Summer of 2016 (more precise scheduling of the regulatory review process will depend on resolution of all regulatory issues and the contractor will be informed of this date).**

**The contractor shall make revisions from the concurrence process two weeks prior to OLEM signoff.**

**Revisions following the OLEM signoff process shall be submitted one month prior to when Administrator approval is expected, contingent upon transmission of the information from the WACOR to the contractor.**

**The contractor shall provide a final draft of the economic impact analysis regarding the agency's action of farms and the Water Resources Reform and Development Act (WRRDA) within 90 days of the work plan approval or by other date provided by the WACOR.**

**It is estimated that 3 drafts and 1 final economic analysis document will need to be drafted during the period of performance of this assignment.**

- f. Small Business Impact Analysis**—The contractor shall evaluate the impacts of the proposed rule on small business. This evaluation shall include characterizing the universe of small businesses affected by the action and assessing the significance of

incremental impacts on these businesses. The contractor shall identify and analyze options to relieve significant economic costs on these businesses in accordance with Agency policy, the Regulatory Flexibility Act (RFA), and the Small Business Regulatory Enforcement Fairness Act (SBREFA). The evaluation shall be revised within one week of receipt of the WACOR's comments.

**Deliverables:**

**The contractor shall provide a draft analysis and evaluation of the impacts on small business regarding the agency's action on farms and the WRRDA within 90 days of the work plan approval or by other date provided by the WACOR (typically one month before the regulatory review process).**

**It is estimated that 3 drafts and 1 final Small Business Impact Analysis document will need to be drafted during the period of performance of this assignment.**

- g. Public Information/Comment Review**—The contractor shall assist in categorizing and summarizing information and/or comments received from the public in response to Federal Register (FR) notices. The WACOR will inform the contractor through a TD of the timeframe for the end of the comment period and completion of comment summaries, based on the number of comments received during public comment periods and the regulatory schedule. The contractor shall also assist in developing the responses to comments based on the direction from the regulatory workgroup and final policy decisions made by Agency officials. The contractor shall develop a summary and response to comment document as issues are resolved during the regulatory process.

**Deliverables:**

**Initial categorization and summary of the public comments due within one week after receipt of TD from the EPA WACOR initiating the task (or according to date specified in the TD).**

**Draft analysis of substantive issues raised in the comments will be due within two weeks after receipt of the TD (or according to date specified in the TD). Issue analysis will be revised within one week of receipt of the WACOR's comments and will be completed within three weeks of when decisions are reached at a workgroup meeting.**

**Draft of discussion points responding to the substantive comments due within two weeks of completing the issue analysis. Discussion points will be revised within one week of the receipt of the WACOR's comments.**

**Draft response to comments document for EPA review three weeks prior to the regulatory review process for the rule (exact date to be specified based on the final rulemaking schedule). Response to comment document shall be revised within one week of receipt of comments from the WACOR.**

**Revisions resulting from comments provided during the concurrence process shall be made three weeks prior to OLEM signoff, contingent upon transmittal of the comments from the WACOR to the contractor.**

**Revisions resulting from comments provided during the signoff process shall be submitted one month prior to when Administrator approval is expected, contingent upon the transmittal of the information from the WACOR to the contractor.**

**It is estimated that 3 drafts and 1 final Response to Comment document will need to be drafted during the period of performance of this assignment.**

- h. Briefing Materials/Miscellaneous Rule Documents**—The contractor shall develop documents as needed in support of rulemaking activities. These documents shall include, for example: briefing materials, data summaries and analyses, workgroup meeting notes, rule fact sheets, status reports, conference papers, issue and options papers, regulatory development schedules, project management artifacts, and special analyses and presentations. The content and type of the material will be specified by the WACOR in a TD. Printing shall be in accordance with the contract EPAAR 1552.208-70 clause.

**Deliverables:**

**The contractor shall provide requested materials and documents within one week of the technical direction or other date as requested by the WACOR.**

**It is estimated that 12 technical documents will need to be drafted in support of the farm rulemaking action.**

- i. Communications Strategy**—The contractor shall provide support in the development of communications strategies to inform regulated entities of the provisions and requirements of the rulemaking. The contractor shall develop the communications strategy documents according to direction provided in the EPA guidelines for the development of regulatory communications packages. As part of the communications activities, the contractor shall prepare supporting documents, such as fact sheets, communication strategies, articles or newsletters for industry publications and web messages to be posted in EPA and other industry sites. The content and type of the material will be specified by the WACOR in a TD.

**Deliverables:**

**The contractor shall provide draft materials to support the development of communications strategies within one month of anticipated presentations to OLEM management or as otherwise specified in the TD. The WACOR expects that the drafts will be needed by September 15, 2016; if not, the delivery date shall be established by TD by the WACOR.**

**The contractor shall respond to EPA comments on the communication strategy within one week of receiving WACOR comments.**



**It is estimated that 3 drafts and 1 final Communication Strategy document will need to be drafted during the period of performance of this assignment.**

- j. General Technical Support (PWS Tasks C, D)** The contractor shall provide both general and specialized technical support for the Oil Program implementation efforts. This task includes assisting with the development of policy/guidance, inspection checklists, internal technical outreach documents, and external technical outreach for government, the regulated community and other interested stakeholders. This task includes but is not limited to the production, development and review of both electronic, HyperText Markup Language (HTML) web ready pages and printed materials in support of technical outreach as related to 40 CFR part 112. All data gathering activities must be conducted in compliance with the Paperwork Reduction Act and Agency Data Quality Standards. The specialized technical support for this task includes use of licensed Professional Engineers (PEs), petroleum engineers, production experts (including hydraulic fracturing and offshore operations), oil spill response professionals/planners, corrosion engineers/professionals, safety/fire engineers, American Petroleum Institute (API)/Steel Tank Institute (STI) certified 653/570/SP001 inspectors, non-petroleum oil specialists including food sanitation or biofuel specialists, non-petroleum oil chemists, and alternative fuel experts. This expertise will be used to address storage tank/pipe construction, corrosion, fire protection, inspection, testing, operation, oil spill response/preparedness and planning, security and management issues related to the regulatory development, implementation, and enforcement of 40 CFR part 112 as required through written technical direction. These experts must be carefully evaluated for potential conflicts of interest.

This task shall include review and comment on technical reports (such as API 653/SP001 inspections, 570 inspections, Non Destructive Testing (NDT) data, corrosion evaluations, standards and practices, and other related inspections) in support of the regional and headquarters offices. The contractor shall perform technical reviews of technical documents and materials as required through written technical direction. The task includes but is not limited to the review and analysis of technical documents, laws/regulations/preamble, standards, specifications, papers, websites, and presentations as related to the regulatory/policy development, enforcement and implementation of 40 CFR part 112.

The contractor shall provide support for technical outreach activities relating to 40 CFR part 112 and other oil program activities. This technical outreach includes but is not limited to the developing and or reviewing the following technical outreach materials: brochures, flyers, fact sheets, videotapes, audiotapes, presentation materials (slides, overheads, etc.), technical press releases, and art/conference displays (booths for conferences). The task may include the design, development and maintenance of web pages and related electronic lists, documents or files related to 40 CFR part 112 and other oil related activities. This task may include formatting and publication assistance for



technical publications, OEM webpages, electronic newsletters (such as the EPA Oil Update and similar documents), Teleconferences, and Audio Visual (AV) production/webinar support (including technical support in script development, booking and arrangement of studio (and related) support, satellite time, and downlink sites and equipment and other support necessary to produce a teleconference/webinar or other AV product). Develop and revise graphics standards in conformance with Agency directive and policies and providing administrative and technical assistance in support of the oil program.

**Deliverables:**

**The contractor shall develop documents as needed in support of rulemaking activities. The contractor shall provide such documents within one week of the technical direction or other date as requested by the WACOR.**

**It is estimated that 12 technical documents will need to be drafted during the period of performance of this assignment.**

- k. Training Support (PWS Task D)** The contractor shall provide support for the mandatory training requirements of EPA Order 3500.1 relating to OEM's 40 CFR part 112 inspector training courses (4 refresher and 40 hour inspector training courses) and all other training programs relating to the implementation of the 40 CFR part 112 regulation and other oil program related functions. This task includes but is not limited to the production, development and review of both electronic, HTML (web ready) web pages and printed training program materials in support of the 40 CFR part 112 inspector training program development and delivery. This may include the development of an online refresher module for inspectors to complete the training in an online setting. This task will include developing versions of the 40 hour course materials that may be developed into or used as webinars to teach to components of the 40 hour course via a webinar. This task also includes support for advanced training courses on inspection related subject matter.

The contractor shall prepare draft and final course materials in support of the On Scene Coordinators (OSC) training program, the Oil Program Introductory Training program (OPA 101) and the International Oil Spill Conference (IOSC) (including supporting the management of the IOSC film festival). In the case of the IOSC this may also include meeting support to assist with the IOSC. This task includes but is not limited to the production, development, and review of electronic and printed training oil program materials in support of the OSC Training Program, the IOSC, and the Oil Program Introductory Training program (OPA 101).

The contractor shall provide expert instructors, trainers and inspectors to instruct EPA staff and/or develop specialized courses. This specialized technical training expertise shall include the utilization of licensed Professional Engineers (PEs), oil spill response professionals/planners, petroleum engineers, corrosion engineers/professionals,

safety/fire engineers, and API/STI certified 653/570/SP001 inspectors, as needed. This expertise will be used to address storage tank/pipe construction, corrosion, production (including hydraulic fracturing), fire protection, inspection, testing, operation, oil spill response/preparedness and planning, security and management issues related to the regulatory and implementation efforts associated with 40 CFR part 112 and other oil program related activities.

The contractor shall provide logistical support for the preparation and delivery of training programs under this task. This support includes online support to host a website for inspectors as well as support for webinar type presentations. The contractor shall provide support for registration and assisting with the negotiation/acquisition of hotels/meeting space for the training and meeting tasks under this work assignment. The contractor may be required to purchase materials to support the course (PadFolios), negotiate bus rental, and complete printing to support the course.

**Deliverables:**

**Within 15 days of the receipt of a TD from the WACOR for a training course/activity, the contractor shall develop a detailed implementation schedule and level of effort for each course/activity.**

**The contractor may be required to assist with the development of the next two installments of the 40-hour course to be held in Summer of 2016 and Spring of 2017. A detailed schedule of interim deliverables (including draft training slides, revised slides, and course support material) will be provided by the WACOR in a TD initiating this task.**

**The contractor shall perform other logistics support duties as specified in the TD.**

**It is estimated that 3 drafts and 1 final Inspector Training materials documents will need to be drafted during the period of performance of this assignment.**

**Task 3 - Logistical Support (PWS Task D)**

The contractor shall attend (either in person or on a conference line-as requested) and submit detailed summaries of regulatory workgroup and other technical meetings to the WACOR. The contractor shall assist in distributing relevant materials to the workgroups in preparation for the meetings, and in collecting any information/data from workgroup members for the same purpose. There may be numerous meetings during the work assignment period. This is an ongoing task and the contractor should expect approximately two meetings per month, including one monthly workgroup.

**Deliverables:**

**Summaries of regulatory workgroup and other technical meetings, if requested by the WACOR, to be provided within one week following the meeting.**

**Deadline for other material to be specified by TD from the WACOR.**

**It is estimated that 10 meeting summary documents will need to be drafted during the period of performance of this assignment.**

### **DELIVERABLES SCHEDULE**

As requested by the WACOR, deliverables will be hard copy and/or in Microsoft Word format, a spreadsheet, a database, other electronic formats and/or CD-ROM, as needed. The contractor shall provide two copies of all draft and final deliverables as well as associated electronic files compatible with Agency equipment, in Arial font unless otherwise requested by the WACOR. Due dates for deliverables will be based on the following schedule:

<b>Task</b>	<b>Deliverable</b>	<b>Schedule</b>
Task 1a	Work plan	Within 15 calendar days of receipt of the work assignment.
Task 1b	Supplemental QA Project Plan	Within 15 days after EPA approval of the Contractor's work plan.
	Revised supplemental QA Project Plan	Within 10 days of receipt of comments from the EPA WACOR, unless otherwise requested by the EPA WACOR.
	Reports of QA work performed	Monthly (may be included in the Contractor's monthly progress report)
Task 2a	Memorandum describing analysis approach	Within 5 days of technical direction or other date as requested by the WACOR
	Summary of analysis findings	One week prior to regulatory workgroup meeting or as requested by the WACOR in a technical direction
	Revised analysis	Within 3 days of receipt of the WACOR's comments.
Task 2b	Draft revisions to existing ICR statement.	2 weeks of receiving technical direction or other date as requested by the WACOR
	Revised ICR statement.	Within 1 week of receipt of the WACOR's comments
Task 2c	Draft technical documents to support rulemaking.	Within 14 days of technical direction or other date as requested by the WACOR
	Final drafts of technical documents to support rulemaking	Within 7 days after receiving comments from the WACOR
Task 2d	Draft preamble.	Within 7 days prior to regulatory workgroup meeting or as requested by the WACOR in a technical direction
	Revised draft preamble	Within 5 days after receiving comments from the WACOR
	Draft preamble for OLEM signoff	14 days prior to OLEM signoff (to be specified by WACOR)
	Final preamble	30 days prior to Administrator approval (to be specified by WACOR)

<b>Task</b>	<b>Deliverable</b>	<b>Schedule</b>
Task 2e	Draft economic analysis documents.	21 days prior to the start of the regulatory (concurrency) review process
Task 2e Cont.	Draft economic analysis for OLEM signoff	14 days prior to OLEM signoff (to be specified by WACOR)
	Final economic analysis	30 days prior to Administrator approval (to be specified by WACOR)
Task 2f	Draft analysis and evaluation of the impacts on small business.	Within 90 days of the work plan approval or by other date provided by the WACOR (expected to be 30 days before the start of the regulatory review process)
	Revised analysis and evaluation of the impacts on small business	30 days prior to Administrator approval (to be specified by WACOR)
Task 2g	Initial categorization and summary of comments.	7 days from receipt of technical direction or other date as requested by the WACOR.
	Draft analysis of substantive issues	14 days from receipt of technical direction or other date as requested by the WACOR
	Revised analysis of substantive issues	7 days after receipt of comments (to be completed within 21 days when decisions are reached at workgroup meeting)
	Draft of discussion points	14 days from completion of issue analysis; to be revised within 7 days of receiving comments
	Draft response to comments	21 days prior to the start of the regulatory review process; to be revised within 7 days of receiving comments
	Draft response to comments	21 days prior to OLEM signoff
	Final response to comment document	30 days prior to Administrator approval (to be specified by WACOR)
Task 2h	Draft documents as needed in support of rulemaking activities.	Within 7 days of the technical direction or other date as requested by the WACOR
	Final documents	Within 5 days of receiving comments from WACOR
Task 2i	Draft material to support communications strategies	Within 30 days of presentations to OLEM management or as otherwise specified by TD (expected 45 days in advance of rule publication in February 2017)
	Revised material to support communications strategies	Within 7 days of receiving comments from WACOR
Task 2j	Draft document.	Within 7 days of technical direction or other date as requested by WACOR
	Revised document	Within 7 days of receiving comments from WACOR

<b>Task</b>	<b>Deliverable</b>	<b>Schedule</b>
Task 2k	Detailed implementation schedule and level of effort for each course/activity. The contractor shall perform other duties as specified in the TD.	Within 15 days of the receipt of a TD from the WACOR
Task 2k Cont.	Training material and supporting documents	Within 7 days of technical direction or other date as requested by WACOR
	Revised training material and supporting documents	Within 7 days of receiving comments from WACOR
Task 3	Summary of workgroup or other technical meetings.	Within 7 days of meeting
	Revised summary of workgroup or other technical meetings	Within 3 days of receiving comments from WACOR

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-34				
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:				
Contract Number EP-C-13-039			Contract Period 09/11/2013 To 07/31/2017 Base                      Option Period Number    3			Title of Work Assignment/SF Site Name OIL PROGRAM SUPPORT				
Contractor ABT ASSOCIATES INC.					Specify Section and paragraph of Contract SOW Contract EP-C-13-039, PWS Tasks A, C					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval					Period of Performance  From 08/01/2016 To 07/31/2017					
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee: \$0.00		LOE: 0						
09/11/2013 To 07/31/2017										
This Action:		\$76,318.00		673						
Total:		\$76,318.00		673						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated: 08/15/2016		Cost/Fee \$76,318.00		LOE: 673						
Cumulative Approved:		Cost/Fee \$76,318.00		LOE: 673						
Work Assignment Manager Name Mark W. Howard						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 202-564-1964				
						FAX Number:				
Project Officer Name Ahmar Siddiqui						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 202-566-1044				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number:				
						FAX Number:				
Contracting Official Name Tammy Adams						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 513-487-2030				
						FAX Number: 513-487-2545				

Digitally signed by TAMMY ADAMS  
 DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS,  
 dnQualifier=0000018417  
 Date: 2016.09.13 07:08:31 -04'00'

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-35			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-13-039		Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3		Title of Work Assignment/SF Site Name Linking WQ Models to Econ					
Contractor ABT ASSOCIATES INC.				Specify Section and paragraph of Contract SOW Sects. A.2.2, A.6, B.4, C.1, C.7					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval				Period of Performance  From   08/10/2016   To   07/31/2017					
Comments:									
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>									
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.									
SFO <input type="checkbox"/> (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)  (Cents)	Site/Project (Max 8)	Cost Org/Code
1									
2									
3									
4									
5									
Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee:		LOE:					
09/11/2013   To   07/31/2017				0					
This Action:				1,325					
Total:				1,325					
Work Plan / Cost Estimate Approvals									
Contractor WP Dated:				Cost/Fee		LOE:			
Cumulative Approved:				Cost/Fee		LOE:			
Work Assignment Manager Name   Matt Heberling  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-569-7917 FAX Number:			
Project Officer Name   Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1044 FAX Number:			
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:			
Contracting Official Name   Tammy Adams <div style="display: flex; justify-content: space-between;"> <div> <b>TAMMY ADAMS</b>            Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS, dnQualifier=0000018417            Date: 2016.08.10 14:33:37 -04'00'            _____            (Signature)         </div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2030 FAX Number: 513-487-2545			

## **WORK ASSIGNMENT**

**I. Title:** Linking Water Quality Models to Economic Models

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-35

**III. Estimated Period of Performance:** Date of Issuance through July 31, 2017

**IV. Estimated Level of Effort:** 1325

**V. Key EPA Personnel:**

**Work Assignment Contracting Officers Representative (WACOR):**

Matthew T. Heberling  
ORD/NRMRL/STD  
513/569-7917

**Alternate Work Assignment Contracting Officers Representative:**

Joel Corona  
OW/WPS  
202/564-0006

**VI. Background and Purpose:**

The 1972 Clean Water Act (CWA) directs the Environmental Protection (EPA) to develop national technology-based regulations for categories of industries that discharge pollutants directly to surface waters (effluent guidelines) or that discharge pollutants indirectly through sewage treatment plants (pretreatment standards). The CWA directs EPA to develop national technology-based regulations for new industrial facilities (new source performance standards).

Under Executive Orders 12866 and 13563, EPA is required to estimate the potential benefits and costs to society. As such, the purpose of this Work Assignment (WA) is to support EPA's efforts to improve its ability to monetize the benefits associated with these regulatory actions.

Under this work assignment, the contractor shall conduct all analyses requiring the collection and manipulation of data and models in accordance with the EPA approved quality assurance (QA) project plan (QAPP) that will be based on Task 2 QAPP language. The QAPP shall describe the procedures for assuring the quality of the primary and secondary environmental and economic data used for this work assignment.

In carrying out the tasks specified in this work assignment, the contractor may be called upon to build upon and continue work performed under WA 1-20, WA 2-20, and WA 2-35 under this



Contract EP-C-13-039, which supports the development of a national water quality benefits modeling framework. The work performed under this work assignment will not duplicate work conducted under the previous work assignments. For such a framework that will use a mix of original economic studies and benefits transfer approaches, understanding how to link water quality models and economic benefits will be an important step. In addition, EPA intends to do a comprehensive assessment of existing water quality models concerning how well they address EPA's current and anticipated water quality modeling needs. The assessment will account for each model's temporal and spatial prediction scale, scope or water types modeled, output parameters, and potential for interoperability with Office of Water's (OW) water quality modeling platform Hydrologic and Water Quality System (HAWQS). Finally, EPA intends to build off the draft memo that describes potential approaches for using available information to create a methodology for assessing surface water quality effects on property values at a national scale.

## **VII. General Requirements of the Work Assignment and Schedule**

Confidential Business Information: During the course of the work assignment, the contractor will not be accessing and evaluating CBI.

Budget Reporting: The contractor under this work assignment shall report to the EPA WACOR and Contract Level Contracting Officers Representative (CL-COR) when 75 percent of the total work assignment funding amount has been depleted. The contractor must report to the EPA WACOR when 75 percent of the approved Work plan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor should refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts shall clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA CL-COR, and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: EPA does not anticipate the need for non-local travel by contractor employees and/or subcontractors to support the scope of this work assignment. Travel may be required under

amendments to this work assignment.

**Deliverable Formatting:** All memos, draft comments, summaries and responses, and chapters are to be provided in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by EPA. Memos are to be written in a manner which will make them easy to turn into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the contractor shall use decimal align in all tables containing columns of numbers of varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the EPA WACOR and will be formatted to be in compliance with the Section 508 Amendment to the Rehabilitation Act of 1973.

### **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the EPA WACOR's comments.

#### **Task 1 - Prepare Work Plan**

The contractor shall prepare a work plan within 15 calendar days of receipt of the work assignment signed by the Contracting Officer. The work plan shall outline, describe, and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the CL-COR and the CO will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the Contracting Officer. The contractor shall prepare a revised work plan incorporating the Contracting Officer's comments, if required. To start this WA, a weekly update call with the EPA WACOR will be required for this work assignment to discuss progress on deliverables, costs, and other potential issues. The update may change to every two weeks, depending on the progress.

#### **Deliverables and schedule under Task 1**

- 1a. Workplan within 15 calendar days of receipt of work assignment.
- 1b. Weekly update call.

#### **Task 2 - Quality Assurance**

##### ***2.1 Background***

Quality Assurance Project Plans are required under the Agency's Quality Assurance Policy CIO-2105, formerly EPA Order 5360.1A2 and implementing guidance CIO-2105-P-01-0. All projects that involve the generation, collection, analysis and use of environmental data must have an approved Quality Assurance Project Plan (QAPP) in place prior to the commencement of the

work. Examples of these environmental data operations are provided in **Table 1-1** below.

**Table 1-1. Examples of work that involves the collection, generation, evaluation, analysis, or use of environmental data.**

Item	Examples
Data	Includes field sampling information (sample location information, flow measurements, temperature, pH, physical observations, etc.), laboratory measurements (e.g., chemical, physical, biological, radiological measurements), data collected from questionnaires, economic data, census data, and any other types of existing data (i.e., data generated for a different purpose or generated by a different organization)
Data generation	Includes field studies, laboratory studies, and generation of modeling output
Data collection	Includes field surveys, questionnaire surveys, literature searches, and third party data
Data evaluation	Includes data inspection, review, assessment, and validation
Data analysis	Includes statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models; database creation, data extraction and data manipulation
Data Use	Any use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, 304(m) program, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs)

Note that QAPPs are required for the development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. (A model is set of equations and assumptions used to predict unknown data.) When existing models are used as a tool to generate or evaluate data, the project QAPP must describe the model and explain how it will be used and how its output will be evaluated to ensure the modeling effort meets the overall quality objectives for the project. Development or revision of new models must be supported by a QAPP that describes the objectives for the model, the quality criteria that will be applied to the model, and the procedures for evaluating whether the model meets those criteria.

## **2.2 QA Project Plan Requirements**

The Contractor has previously prepared a contract-wide Programmatic QAPP (PQAPP) for Contract EP-C-13-039. This PQAPP describes, in a single document, information that is not site or time-specific, but applies throughout the program (i.e., the duration of the contract). When tasked with preparing the PQAPP, the Contractor was informed the PQAPP may need to be supplemented with project-specific details to support individual work assignments that involve the collection, generation, evaluation, analysis, or use of environmental data.

The activities in this work assignment involve gathering, evaluating, analyzing, and otherwise using existing environmental data (known as “secondary” use of data) and collecting primary data using EPA 308 Authority. However, EPA has determined the Contractor is operating under the existing PQAPP and the PQAPP addresses QA requirements for this work assignment. In support of this work assignment, the Contractor shall ensure the work plan provides enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered when using existing sources of data to perform economic analyses in support of the Unconventional Oil and Gas (UOG) final rulemaking, centralized

waste treatment (CWT) study, and Petroleum Refinery Study; and collecting primary financial and engineering information for 308 letters, and developing a survey for the CWT industry.

- The type of data to be gathered or used under this work assignment to support the project objectives—including data from search engines, federal databases, EPA data bases, letters from industry—as a well as a rationale for when those sources are appropriate and what data available in each will support the project.
- The quality objectives needed to ensure the data will support the project objectives, and
- The quality assurance/quality control (QA/QC) activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

**Table A1** in the Appendix demonstrates how the PQAPP addresses QA requirements for this work assignment. The contractor shall fill in staff roles to the Table A1 checklist under A.4 and make any additional detailed notes in the ‘explanatory comments’ column as requested by the WACOR. The contractor shall then include the completed Table A1 as a separate Appendix A to the workplan upon submittal to EPA. This Appendix A should be a stand-alone document if QA documentation is requested, therefore the Table A1 title must include the title of the WA, WA number, contract number, and what projects each covers. The WACOR has provided this information in the title, which the contractor may use to fulfill this requirement.

### ***2.3 Additional QA Documentation Required***

The EPA Quality Manual for Environmental Programs (CIO 2105-P-01-0, May 2000) requires published Agency reports containing environmental data to be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their originally intended application. The EPA Quality Manual further requires Agency reports to be reviewed by the QA manager (or other authorized official) before publication to ensure that an adequate discussion of QA and QC activities is included. The purpose of the review is to ensure the reports provide enough information to enable a knowledgeable reader to determine if the technical and quality goals were met for the intended use of the data. Reports should include applicable statements regarding the use of any environmental data presented as a caution about possible misuse of the data for other purposes. For example, a Technical Support Document or Study Report must include a clear discussion of the quality management strategies (including the project goals and objectives, quality objectives and criteria, and QA/QC practices) that were employed to control and document the quality of data generated and used. These documents should discuss any deviations from procedures documented in the EPA-approved QAPP(s) supporting the project, the reasons for those deviations, any impact of those deviations had on data quality, and steps taken to mitigate data quality issues.

In support of this Agency requirement, all major deliverables (e.g., Technical Support Documents, Study Reports, Analytical Methods) produced by the Contractor under this work assignment must include a discussion of the QA/QC activities that were performed to support the deliverable, and this discussion must provide a sufficient level of detail to allow the Office of Research and

Development, Sustainable Technology Division's (STD) QA Coordinator (or designee) to determine if the QA/QC strategies implemented for the project sufficiently support the intended use of the data. Upon receipt, the EPA WACOR will review each applicable report and certify whether the Contractor has adhered to the QA requirements documented in the Contractor's PQAPP.

The Contractor shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the QAPP, and corrective actions taken. If desired, the Contractor may include this as a part of the contract-required monthly financial/technical progress report.

#### ***2.4 Data Quality Act/Information Quality Guidelines Requirements***

The Data Quality Act (known as the Information Quality Act) requires EPA to ensure that influential information disseminated by the Agency is sufficiently transparent in terms of data and methods of analysis the information is capable of being substantially reproduced. To support compliance with these data transparency/data reproducibility requirements, EPA plans to include QAPPs as part of any rulemaking record documentation to be made available to the public. (This includes PQAPPs and Supplemental QAPPs (SQAPPs).) The Contractor may claim information in QAPPs as confidential; if the Contractor chooses to do so, the Contractor shall submit a sanitized (i.e., public) version and an unsanitized (i.e., confidential) version at the time the QAPP is submitted for approval by EPA. The sanitized version shall be included in the public docket for the applicable rulemaking (or other docket record), and the unsanitized version shall be included in a non-public (i.e., confidential) portion of the docket (or record).

Information contained in the approved QAPP shall be transparent and reproducible and meet the requirements of the Data Quality Act for influential information. EPA's *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency* (EPA/260R-02-008, October 2002), referred to as "EPA's Information Quality Guidelines," describe EPA procedures for meeting Data Quality Act requirements. Section 6.3 of EPA's Information Quality Guidelines indicate that "especially rigorous robustness checks" should be applied in circumstances where quality-related information cannot be disclosed due to confidentiality issues. Where applicable, the Contractor should indicate which results were obtained using the tools (standard operating procedures (SOPs), checklists, and guidelines) the Contractor designates as confidential so the EPA WACOR can easily identify the areas that shall require rigorous robustness checks and document that those checks have been performed. At the discretion of the EPA WACOR, the contractors may be requested to prepare pre-dissemination review checklist as described in Appendix B of the Office of Water Quality Management Plan, April, 2015. If this is required, the EPA WACOR shall notify the Contractor through written technical direction.

### ***Deliverables and schedule under Task 2***

<b>Deliverable</b>	<b>Projected Schedule Date</b>
Monthly reports of QA work performed (may be included in the Contractor's monthly progress report)	Monthly throughout the WA period of performance

### **Task 3 - Prepare Standardized Naming Convention and Version Control Memorandum**

The contractor shall adhere to the EPA WACOR approved standardized naming convention and version control (SNCVC) plan that was developed under the Construction and Development WA 0-01 of contract EP-C-07-023 (WA0-01\_T1\_SNCVC\_08.31.07\_V1.pdf). The contractor shall use this standardized convention for all deliverables associated with this work assignment. The EPA WACOR may request the contractor through written technical direction to amend the SNCVC memorandum at any point under this WA. The EPA WACOR will review the revised memorandum and then provide the contractor with written notification of approval or edits that need to be made. The contractor shall prepare the edited SNCVC memorandum incorporating the EPA WACOR's comments, if required. After receiving notification of approval the contractor shall use the revised SNCVC.

### **Deliverables and schedule under Task 3**

- 3a. Revised SNCVC memorandum within 3 calendar days of EPA WACOR technical direction.
- 3b. If additional edits are required the memorandum must be updated within 3 calendar days of receipt of comments from the EPA WACOR, at technical direction of EPA WACOR.

### **Task 4 – Source Review, Acquisition, and Preparation of Water Quality Data (Contract PWS section C.7. Database Development and Management)**

EPA anticipates performing analyses of the economic benefits associated with changes in surface water quality. To perform these analyses, EPA will need contractual support for assessing, obtaining, preparing, and summarizing surface water quality monitoring data and surface water quality estimates derived from surface water modeling.

Under WA 1-20 and 2-20, the contractor assessed, obtained, cleaned, and provided monitoring data for multiple counties in Florida, Ohio, and New York to EPA. EPA anticipates the need for the contractor to support EPA in augmenting, interpreting, and/or using these data sets. EPA will specify the nature of the required support through written technical direction.

In addition, the EPA WACOR will provide technical direction to the contractor that identifies up to 3 additional data searches for new locations. EPA anticipates that one of these searches will focus on surface water quality data for Washington state counties adjacent to Puget Sound. EPA anticipates potentially undertaking one or two additional searches that would be broader in geographic scope and would be tailored to support the needs of potential methodologies for



estimating recreational use value or property value effects from surface water quality changes at a national or large regional scale.

EPA will specify locations, time periods, monitoring frequency, surface water categories, and surface water model types through technical direction. EPA will identify surface water quality data sources for each location already known to EPA and direction on whether the contractor should further investigate those sources.

For each location, the contractor shall assess available sources of water quality monitoring data and surface water model estimates for constituent parameters of interest including, but not limited to, total suspended solids (TSS), biological oxygen demand (BOD) chlorophyll a, clarity (i.e., secchi depth), dissolved oxygen, pathogens, nitrogen, phosphorus, and biotoxins. The contractor shall search for state or jurisdiction level information on impairment events, such as algal blooms, fish kills, beach closures, shellfish bed closures, fishing advisories, and swimming advisories. In addition, the contractor shall search for water quality indices designed and used by state or local jurisdictions to provide an aggregate measure of surface water quality on an annual or more frequent basis. EPA will provide guidance on any additional parameters of interest through technical direction.

The contractor shall identify and review water quality information available from public sources, including Federal, state, and local organizations (e.g., watershed organizations, academic institutions). As needed, the contractor shall obtain the data in order to conduct this review. The contractor shall characterize and assess the data available for each location in a summary memo or other written format. The report shall describe data sources, water body type(s), geographic extent, number and location of monitoring stations, parameters monitored, monitoring frequency (e.g., daily, monthly, seasonally), and monitoring period (start/end). The contractor shall provide a description of key features for any water quality indices identified. The contractor shall provide maps showing the location of monitoring stations relative to land features and county boundaries.

The contractor shall provide the written assessment to EPA. After considering the assessment, EPA will provide technical direction to the contractor on any research needed to complete assessment of the data. Research topics could include, but are not limited to, obtaining additional information on data quality, assessing suitability of data for calculation of a water quality index score, evaluating methodologies for addressing data gaps, and assessing possibilities for aggregation of data from multiple monitoring stations. The contractor shall conduct the specified research, incorporate it in a revised assessment report, and submit the revised report to EPA.

EPA will provide technical direction to the contractor on what water quality data is suitable for further use. The contractor shall obtain the data (if not already obtained during review process), clean, and prepare it for use by EPA. EPA will provide technical direction to the contractor on cleaning and preparation requirements. These could include, but are not limited to, specific data formatting requirements, preliminary screening of data points, and preliminary aggregation of data points. The contractor shall provide a data field dictionary for each database they prepare. The contractor shall submit the water quality data, data field dictionary, and a summary memo or other written description describing the methods used for data cleaning and preparation to EPA.

#### **Deliverables and schedule under Task 4**

- 4a. Written assessment of availability and suitability of surface water quality data – within 30 calendar days of receipt of written technical direction from EPA WACOR.**
- 4b. Revised written assessment of the availability and suitability of water quality data – within 14 calendar days of receipt of comments from EPA WACOR.**
- 4c. Water quality data sets and summary description – within 60 calendar days of receipt of written technical direction from EPA WACOR.**

#### **Task 5 – Water Quality Modeling Support (Contract PWS B.4. Methodology Development and Technical Review; C.1. Collection/Preparation of Reports)**

EPA has invested in the development of a watershed and surface water quality and quantity modeling platform known as HAWQS (Hydrologic and Water Quality System) for rivers and larger streams in the coterminous United States. Similar national modeling platforms do not exist for other surface water types (i.e., Great Lakes, estuaries, coastal waters, and streams and their associated watersheds below the hydrologic unit code-12 (HUC-12) scale). These water body types are addressed by other existing models that may differ in their scope, temporal and spatial scale, surface water parameters modeled, and other attributes.

Under this Task, the contractor shall provide support to EPA in identifying, characterizing and evaluating the capabilities present in other existing models to complement those provided by HAWQS. A primary objective of the task is to identify and prioritize ways to address critical gaps in modeling capacity for national-scale and large regional scale evaluations, including surface water types (e.g., small streams, estuaries, Great lakes, coastal waters), and processes or constituents not addressed in HAWQS.

Under WAs 1-20 and 2-20, the contractor worked with EPA to create a framework refining the scope of the model review, identify readily available information resources (including EPA experts), conduct an initial literature review, summarize information from the literature and other sources in tabular and text form, and draft a preliminary outline for a final summary report. The contractor shall build upon these prior efforts under this WA.

EPA anticipates that this task shall consist of the steps described below. Although work will generally proceed in the sequence described below, EPA anticipates the overall effort will be iterative. For example, the contractor will work with EPA to define the scope for review under prior WAs. EPA anticipates continued effort under this WA to refine the scope of the review as new information is obtained.

##### *Step 1: Assemble existing information on surface water quality models.*

Under WAs 1-20 and 2-20, the contractor collected and summarized information on water quality models from the literature and websites in both textual and tabular formats. The contractor shall refine and augment the information contained in these materials with



new information as it becomes available. This new information may arise from discussions with EPA staff experts, discussions with experts outside EPA, or through additional literature and website review. EPA anticipates that additional literature search needs will be identified as an outcome of discussions with EPA and non-EPA experts (see Steps 2 and 3). EPA shall provide guidance on the scope of additional information review and summarization under this task through written technical direction. The contractor shall submit the summary materials to the EPA WACOR for review and comment. The contractor shall revise the materials in response to EPA comments.

*Step 2: Discussions with EPA staff experts.*

EPA will hold discussions with EPA staff experts with the following goals:

- identify modeling resources available within EPA;
- solicit feedback on the initial written summary of information on water quality models;
- answer questions about the nature and utility of certain models;
- solicit suggestions of other potentially useful resources for the effort (e.g., additional models, literature, modeling experts).

Based on written technical direction from the EPA WACOR, the contractor shall assist the EPA WACOR with the development of a list of EPA staff to contact, and discussion questions. The contractor shall participate in the conversations between the EPA WACOR and EPA staff experts via telephone. The contractor shall keep detailed notes of the conversations and provide a summary (including any action items) to the EPA WACOR. EPA anticipates holding discussions with up to 25 experts.

*Step 3: Discussions with non-EPA water quality modeling experts.*

EPA will hold discussions with non-EPA water quality modeling experts with the following goals:

- solicit feedback on the initial written summary of information on water quality models;
- answer questions about the nature and utility of certain models;
- solicit suggestions of other potentially useful resources for the effort (e.g., additional models, literature, modeling experts).

Based on written technical direction from the EPA WACOR, the contractor shall assist the EPA WACOR with developing a list of potential non-EPA experts to contact. The contractor shall assist the EPA WACOR with the development of discussion questions and shall participate in conversations between the EPA WACOR and non-EPA experts via telephone. The contractor shall keep detailed notes of the conversations and provide a summary (including any action items) to the EPA WACOR. EPA anticipates holding discussions with up to 25 experts.

*Step 4: Create written report summarizing findings.*

Based on technical direction from the EPA WACOR, the contractor shall assist the EPA WACOR in developing a written report addressing models and resources available for supporting the EPA Office of Water's surface water quality modeling needs at the national and large regional scale. The contractor shall summarize information obtained in

prior steps under this Task in the report. The report shall provide background information on the Office of Water's modeling needs, describe the methods used to obtain information, identify and describe available resources, identify important gaps, and suggest potential actions to address those gaps. EPA anticipates that this report will be approximately 40 pages in length (not including appendices). The contractor shall submit the summary report to the EPA WACOR for review and comment. The contractor shall revise the report in response to EPA comments.

### **Deliverables and schedule under Task 5**

- 5a. Written summary of existing information (Step 1) – within 30 calendar days of receipt of written technical direction from EPA WACOR.**
- 5b. Revised Preliminary Model Information Collection Framework (Step 1) – within 14 calendar days of receipt of comments from EPA WACOR.**
- 5c. Notes from Phone Conversations with EPA Staff Experts (Step 2) – within 14 calendar days of each conversation.**
- 5d. Revised Notes from Phone Conversations with EPA Staff Experts (Step 2) – within 10 calendar days of receipt of comments from EPA WACOR.**
- 5e. Notes from Phone Conversations with Non-EPA Experts (Step 3) – within 14 calendar days of each conversation.**
- 5f. Revised Notes from Phone Conversations with Non-EPA Experts (Step 3) – within 10 calendar days of receipt of comments from EPA WACOR.**
- 5g. Summary Findings Report (Step 4) – within 45 calendar days of receipt of technical direction from EPA WACOR.**
- 5h. Revised Summary Findings Report (Step 4) – within 30 calendar days of receipt of comments from EPA WACOR.**

### **Task 6 –Acquisition, Preparation, and Summarization of Housing Transaction Data (Contract PWS A.2.2. Benefit Analysis; C.1. Collection/Preparation of Reports)**

The goals of this task are the following:

- Obtain, clean, and format several datasets into a form suitable for estimating hedonic property value regressions.
- Prepare a memo, data sets/meta-data sets, or other materials on options and considerations for use of hedonic estimates in the regulatory analysis context.

#### ***Subtask 6.1 - Acquisition, Preparation, and Summarization of Housing Transaction Data***

The goal of this Subtask is to obtain, clean, and format several datasets into a standardized form suitable for estimating hedonic property value regressions. Under WAs 1-20

and 2-20, the EPA WACOR identified study locations of interest (selected counties in Florida, New York, Ohio, and Washington) and the contractor subsequently created several property sales and parcel data files and enhanced geographic information system (GIS) databases for those locations. The necessary datasets have been formatted and delivered to EPA for the majority of EPA's target locations. The contractor shall complete data sets for 2 to 5 remaining counties. EPA will specify these counties through written technical direction and anticipates that several will be from the lower Hudson River watershed in New York. EPA does not anticipate examining any additional counties outside of those identified under WAs 1-20 and 2-20.

Based on written technical direction from the EPA WACOR, the contractor shall deliver (1) an enhanced GIS database, and (2) cleaned and original property sales and parcel data files for each county. The contractor shall provide programming code and documentation for (1) and (2). The contractor shall prepare materials according to all relevant technical direction issued under WA 2-20. EPA will review the deliverables and the contractor shall respond to and address any EPA inquiries as needed.

EPA anticipates the need to request assistance from the contractor for amendment or interpretation of data sets submitted to EPA under Task 7 of WA 2-20 as EPA progresses with its analysis of these data sets. EPA will specify the nature of this assistance through written technical direction.

#### **Deliverables and schedule under Subtask 6.1:**

- 6.1a. Draft GIS database for 2 to 5 counties with multiple map layers - within 30 calendar days of receipt of written technical direction from EPA WACOR.**
- 6.1b. Revised GIS database for any study location - within 15 calendar days of receipt of comments from the EPA WACOR.**
- 6.1c. Draft property transaction and parcel datasets for 2 to 5 counties - within 30 calendar days of receipt of written technical direction from EPA WACOR for deliverable 6.1a.**
- 6.1d. Revised property transactions and parcel datasets for any study location - within 15 calendar days of receipt of comments from EPA WACOR.**
- 6.1e. All original data purchased/obtained from their respective sources delivered to the EPA WACOR - within 15 calendar days of completion of deliverables 6.1a and 6.1c.**
- 6.1f. All code used to clean or manipulate data under this Subtask - within 15 calendar days of receiving written technical direction from EPA WACOR for deliverable 6.1c.**

*Subtask 6.2 - Options and Considerations for Use of Hedonic Estimates in the Regulatory Analysis Context*

Under Task 11 of WA 2-20, the contractor prepared a preliminary draft memo on options and considerations for use of hedonic estimates in the regulatory analysis context. Based on written technical direction from the EPA WACOR, the contractor shall build upon this preliminary draft memo and any subsequent work conducted under Subtask 7.4 of WA 2-20. EPA anticipates that work under this Subtask could entail:

- (i) Revision of existing memos and/or drafting of additional technical memos;
- (ii) Conducting literature reviews and compiling a dataset of past hedonic property value studies to facilitate meta-analysis; and
- (iii) Compiling regional or nationwide datasets of the population of interest for regulatory analysis. The latter dataset may entail, for example, aggregate statistics at the Census block group (or tract) level on the number of homes and mean (or median) housing values for homes in close proximity to waterbodies. Such a dataset would be spatial in nature, linking block groups to specific waterbodies. The development of such a dataset would require compiling and performing GIS calculations on data from the U.S. Census Bureau's decennial census and American Community Survey (ACS), the National Hydrography Dataset (NHD), and the National Land Cover Dataset (NLCD). Efforts pertaining to item (iii) will build on past work submitted by Abt to the Office of Water under this contract, including efforts related to the water quality stated preference meta-analysis under WA 2-09, the hedonic benefit transfer methodology developed under WA 1-14, and the aforementioned preliminary draft memo under task 11 of WA 2-20. These efforts may potentially relate to and draw upon work under WA 2-35, Tasks 13 and 14 under WA 2-20, and Tasks 4 and 5 under WA 3-20.

#### **Deliverables and schedule under Subtask 6.2:**

- 6.2a. Draft technical memo - within 30 calendar days of receiving written technical direction from EPA WACOR.**
- 6.2b. Revised technical memo - within 14 calendar days of receipt of comments from EPA WACOR on deliverable 6.2a.**
- 6.2c. Draft hedonic property value meta-analytic dataset - within 30 calendar days of receiving written technical direction from EPA WACOR.**
- 6.2d. Revised hedonic property value meta-analytic dataset - within 15 calendar days of receipt of comments from EPA WACOR on deliverable 6.2c.**

**6.2e. Draft nationwide housing population or other dataset - within 30 calendar days of receiving written technical direction from the EPA WACOR.**

**6.2f. Revised nationwide housing population or other dataset - within 15 calendar days of receipt of comments from EPA WACOR on deliverable 6.2e.**

**Task 7: Complete Literature Reviews on Linking Water Quality Measures to Economic Models and on Perceptions of Ecosystem Services and Water Quality (Contract PWS A.2.2. Benefit Analysis; C.1. Collection/Preparation of Reports)**

Under Task 4 of WA 2-35, the contractor prepared a draft report, Summary and Discussion of Literature Linking Water Quality to Economic Value. Under Task 5 of WA 2-35, the contractor prepared a draft memo on how aquatic ecosystem services or surface water quality attributes are perceived and valued by the public and how these services or attributes have been linked to ecological endpoints and water quality management policies in past studies. The contractor will be asked to make final edits on both of these literature review memos. The EPA WACOR through written technical direction will provide specific revisions, additional sources, and deliverable dates to the contractor. EPA anticipates the edits will require final searches of literature to ensure completeness, minor editorial corrections, and formatting.

**Deliverables and schedule under Task 7**

**7a. Final version of Summary and Discussion of Literature Linking Water Quality to Economic Value as specified through written technical direction from EPA WACOR.**

**7b. Final version of Summary and Discussion of Understanding of Aquatic Ecosystem Services or Surface Water Quality Attributes by the General Public as specified through written technical direction from EPA WACOR.**

**Task 8 – Focus Group Script Review (Contract PWS A.2.2. Benefit Analysis; C.1. Collection/Preparation of Reports)**

Under Subtask 5.1 of WA 2-35, the contractor identified potential researchers who may have scripts from focus groups. The focus group scripts may provide insight into how the general public or select samples of the public may perceive water quality attributes or aquatic ecosystem services. The Contractor has made initial contact with economists who use surveys. If the initial contacts prove to be productive (e.g., transcripts have already been produced from recordings), the Contractor shall begin reviewing transcripts, summarizing findings and writing a summary memo. The information gleaned from the transcripts will be included in the Summary Table already produced under Subtask 5.2 of WA 2-35 or as a separate deliverable once the materials have been reviewed. If the majority of the materials are only available as recordings, EPA will provide technical direction for next steps or determine this is not a feasible task.

**Deliverables and schedule under Task 8**

**8a. Written summary of existing information (i.e., transcripts vs. recordings, source of information, etc.) available from resource economists—within 7 days of receiving written technical direction from EPA WACOR**

**8b. EPA WACOR as specified through written technical direction will decide whether to move forward with the remaining deliverables after reviewing summary—15 days after receiving written summary from contractor.**

**8b. Memo summarizing findings from focus group transcripts and incorporation of phrases that relate to aquatic services into summary table described in Subtask 5.2 of WA 2-35-- within 45 calendar days of receiving written technical direction from EPA WACOR.**

**Task 9 – Develop, Test, Validate, or Revise Water Quality Indices (WQIs), Water Quality Ladders (WQLs), or Other Potential Approaches for Linking Water Quality Measures to Economic Models**

EPA anticipates one or more potential studies for linking water quality measures to economic models. These studies are intended to test, validate, and/or revise WQIs, WQLs or other linkages to better support benefits analyses and the national water quality benefits platform. To perform these analyses EPA will need support for reviewing, testing, validating, and developing linking approaches.

For this WA, currently there is no work or deliverables for the contractor to prepare under Task 9. However, the EPA WACOR anticipates amending the WA during the option period to add work and deliverables for Task 9.

## Appendix

### Checklist for Projects Utilizing Existing Data

The items noted in this checklist are adapted from those elements found in *EPA Requirements for QA Project Plans (QA/R-5)* (EPA, 2001a), but tailored to the use of existing data.

**Table A1. QAPP Elements Applicable to WA 3-35 Linking Water Quality Models to Economic Models, EP-C-13-039, Project that relies on Existing Data (Tasks 4, 5, 6, 7, 8, and 9)**

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A1. Title &amp; Approval Sheet</b>				
Project title	X			WA 3-35 Linking Water Quality Models to Economic Models
Organization's name	X			Abt Associates
Effective date and/or version identifier	X			Section ii of PQAPP
Dated signature of Organization's project manager	X			Section ii of PQAPP
Dated signature of Organization's QA manager	X			Section ii of PQAPP
Other signatures, as needed (e.g., STD Project Officer, STD QA Coordinator)	X			Section ii of PQAPP
Revision History			X	
<b>A2. Table of Contents</b>				
Includes sections, figures, tables, references, and appendices	X			Section ii of PQAPP
Document control information indicated (when required by the EPA Project Manager and QA Manager)	X			Section ii of PQAPP
<b>A3. Distribution List</b>				
Includes all individuals who are to implement or otherwise receive the QAPP and identifies their organization	X			Section 2.1 of PQAPP; pages 5-7
<b>A4. Project/Task Organization</b>				
Identifies key individuals with their responsibilities (e.g., data users, decision makers, project QA manager, Subcontractors, etc.) and contact info.	X			Reference PQAPP section 2.1 on page 5. Referencing table 2.1 and descriptions on page 7 of PQAPP. Specific people identified for the following roles: PQA: Abt WAM: OST WACOR: Matt Heberling
Organization chart shows lines of authority & reporting responsibilities	X			Reference PQAPP section 2.1 for overall picture
Project QA manager position indicates independence from unit collecting/using data	X			Reference PQAPP section 2.1 on page 5.

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A5. Problem Definition/Background</b>				
Clearly states problem to be resolved, decision to be made, or hypothesis to be tested	X			PQAPP Section 2.2 – goal of program is to conduct economic analyses for ELGs See PQAPP table 2-2: cost-benefit and economic impact analysis, industry profiles, collection /preparation of reports, review and analysis of public comments, legislative and litigation support, database development and management,, see WA
Identifies project objectives or goals	X			Reference PQAPP Table 2.2 ; see WA
Historical & background information				
Cites applicable technical, regulatory, or program-specific quality standards, criteria, or objectives	X			Section 2.2 – goal of program is to conduct economic analyses for ELGs. See table 2-2 and above reference for specific analyses
<b>A6. Project/Task Description</b>				
List measurements to be made/data to obtain	X			See bulleted list in section 2.3 of PQAPP
Notes special personnel or equipment requirements			X	
Provides work schedule			X	No set dates, addressed in work plan, not necessary for QAPP.
<b>A7. Overall Quality Objectives &amp; Criteria</b>				
States overall quality objectives and limits needed to support the project goals and objectives cited in A5	X			Section 2.4 of PQAPP (starting page 16). See WA.
<b>A8. Special Training Requirements/ Certifications</b>				
Identifies specialized skills, training or certification requirements	X			section 2.5 of PQAPP, sufficient
Discusses how this training will be provided/the necessary skills will be assured and documented	X			section 2.5 of PQAPP, sufficient
<b>A9. Project-level Documents &amp; Records</b>				
Describes process for distributing the approved QAPP and other planning documents (and updates) to staff	X			Section 2 of PQAPP, pages 5-7
Identifies final work products that will result from the project				Section 2.6 of PQAPP
Describes the process for developing, reviewing, approving, and disseminating the final work products and individuals responsible for these processes	X			See Appendix A of PQAPP
<b>B1. Data Needs</b>				
Detailed list/description of the specific data elements needed to support project goals	X			See Table 3-1 of PQAPP headings: Company Financial Data,, & Other Industry Data, & valuation and Economic Impact: including specifically:, US Census Bureau, EIA, RMS



<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
Description of the scope of the data elements that you need (e.g., data supporting specific treatment options vs. the full range of options, data supporting the entire country vs. a specific geographic region)				See Table 3-1 of PQAPP headings: Company Financial Data,, & Other Industry Data, & valuation and Economic Impact: including specifically:, US Census Bureau, EIA, RMS
If project includes development or update of a project database, QAPP identifies and defines each database field	X			
<b>B2. Potential Data Sources</b>				
Identifies and describes potential sources of the existing data needed (e.g., photographs, topographical maps, facility or state files, census data, meteorological data, publications, etc.) and the rationale for their use	X			Section 3.1.2 of PQAPP
If literature searches are used, describes the search engines that will be used and key search terms	X			Section 3.1.2 of PQAPP
If databases or models will be used, describe the database (or model) in terms of who developed it and operates it and the type of data it contains	X			See section 3 of PQAPP
For other potential sources, describe the potential sources & rationale for considering or using each one	X			Section 3.1.2 of PQAPP
<b>B3. Criteria for Selecting Data Sources</b>				
Identifies each criterion that will be used to determine if the candidate data sources listed in B2 will meet your needs, and how each criterion is defined. (Criteria vary by project; examples include reliability, age, applicability, quantity, format, and others)	X			PQAPP 3.1.3 Criteria for Selecting Data Sources; data sets (page 45)
Explains rating system used to evaluate source against each criterion	X			PQAPP section 3.1.4, page 48
<b>B4. Data Value Selection Approach</b>				
For data sources that meet the criteria identified in B3: Describes the criteria and procedures that will be used to determine which value(s) identified in the acceptable sources are most appropriate for use in the project	X			Section 3.1.4
For data that do not meet these pre-established criteria but are the only data available, explains how the decision to use such data will be made and documented			X	
<b>B5. Resolving Data Gaps</b>				
Describes the process for identifying and addressing data gaps that still exist after candidate data sources have been evaluated and appropriate data values have been identified	X			Section 3.1.5 of PQAPP

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
Describes the process that will be used to address any new data needs revealed during the data gathering process (i.e., additional data elements not previously considered)			X	
<b>B6. Data Gathering Documentation and Records</b>				
Describes how results of the source selection and the data value selection will be documented, including any sources or values that were rejected and the rationale for not using them	X			PQAPP section 3.1.6 Data Gathering Document and Records, page 49. See section 4.1.1
For data that are deemed acceptable and that will be used, explains how each data element will be associated to its original source citation (i.e., bibliographic information, telephone contact reports, email messages, etc.)	X			PQAPP section 3.1.6 Data Gathering Document and Records, page 49
<b>C1. Standardization of Data Elements</b>				
Describes the process to ensure that units and other key measures are captured and standardized (or otherwise made comparable) in the database	X			PQAPP 3.2.1
If the project requires that all fields be standardized to a single set of units (e.g., US dollars for economic data, µg/L for chemical data), identifies the standard units that will be required for each data element	X			PQAPP 3.2.1
Identifies the procedures for converting data reported in other units to the standardized units, including any rounding or truncating procedures, and procedures for ensuring these conversions are performed correctly	X			PQAPP 3.2.1
If standardization of data elements is not needed, explains the process for ensuring that data presented in varying units are comparable enough for use in the project and that project staff members and other data users will be able to readily identify differences in units	X			PQAPP 3.2.1
<b>C2. Data Entry</b>				
Explains the process for manually entering selected data into the project database, who will be responsible for such data entry, and the QC strategies that will be used to ensure the database accurately and completely captures the data as presented in the original source	X			PQAPP section 3.2.2

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
<b>C3. Merging or Uploading Electronic Data from Existing Sources</b>				
If data are available electronically and will be uploaded or merged into the project database: describes the procedures that will be followed to ensure that errors are not introduced during the upload/merge process and the final database reflects the original dataset(s)	X			PQAPP section 3.2.3
<b>C4. Data Review</b>				
Describes the process for ensuring the data have been recorded, transmitted, and processed correctly	X			PQAPP section 3.2.4
<b>C5. Data Storage and Manipulation</b>				
Describes how the existing data will be stored	X			PQAPP section 3.2.5
Describes who will be responsible for access to and maintenance of the stored data	X			PQAPP section 3.2.5
Describes how the existing data will be incorporated with other project data to support the project goal/decision to be made	X			PQAPP section 3.2.5
Describes the QC strategies that will be employed to ensure the integrity of the data is not compromised during data storage, access/retrieval, updates, or other manipulation	X			PQAPP section 3.2.5
<b>D1. Data Quality Verification and Data Quality Reporting</b>				
Describes the process for verifying the final set of data meets the overall criteria originally specified for the project	X			PQAPP Section 3.3.1
Describes how these determinations will be documented and reported	X			PQAPP Section 3.3.1
For data that don't meet the pre-established specifications, explains the process for determining if they are usable and how such decisions will be documented	X			PQAPP Section 3.3.1
<b>D2. Use/Analysis of the Existing Data</b>				
Provides details regarding the exact means in which the data will be used to meet project objectives	X			PQAPP 3.2.2
Includes an explanation or list of the information to be calculated and the data elements that will be used to make those calculations	X			PQAPP 3.2.2
Includes applicable calculations and equations (if known) or explanations of how they will be developed	X			PQAPP 3.2.2
Includes plans for excluding outliers	X			PQAPP 3.2.2

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
<b>D3. Methodology Documentation and Conceptual Review</b>				
If exact methodologies for analyzing the data will need to be developed or modified during the course of data analysis, explains the process by which such methodologies will be documented, who is responsible for reviewing/ approving their use, and how the methodologies will be checked to ensure they yield the desired products	X			PQAPP 3.2.3
<b>D4. Technical Review of the Data Analysis</b>				
Describes activities that will be used to ensure the data analyses are being implemented as specified and will support project objectives	X			PQAPP 3.3.4
Explains procedures for identifying and notifying appropriate personnel if changes to the originally planned procedures are warranted, and the process for approving, documenting and implementing such changes	X			PQAPP 3.3.4
<b>D5. Final Verification of Data Analysis and Reconciliation with User Requirements</b>				
Describes the process for reviewing the final work product to ensure the work was generated in accordance with the QAPP, and the work product addresses the overall project goals and objectives	X			PQAPP 3.3.5
Describes how the results of this assessment will be documented	X			PQAPP 3.3.5
Describes how any limitations of the data or data analyses that were used to prepare the final work product will be documented and communicated	X			PQAPP 3.3.5

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 3-35								
		<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-13-039	Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number      3	Title of Work Assignment/SF Site Name Linking Water Quality Models t								
Contractor ABT ASSOCIATES INC.		Specify Section and paragraph of Contract SOW Sects. A.2.2, A.6, B.4, C.1, C.7								
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval		Period of Performance  From   08/10/2016   To   07/31/2017								
Comments:										
<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Superfund         <span>Accounting and Appropriations Data</span> <input checked="" type="checkbox"/> Non-Superfund       </div>										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee: \$0.00		LOE: 0						
09/11/2013 To 07/31/2017										
This Action:		\$133,159.00		1,325						
Total:		\$133,159.00		1,325						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated: 08/26/2016		Cost/Fee \$133,159.00		LOE: 1,325						
Cumulative Approved:		Cost/Fee \$133,159.00		LOE: 1,325						
Work Assignment Manager Name   Matt Heberling  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-569-7917 FAX Number:				
Project Officer Name   Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 202-566-1044 FAX Number:				
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: FAX Number:				
Contracting Official Name   Tammy Adams <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code: Phone Number: 513-487-2030 FAX Number: 513-487-2545				

Digitally signed by TAMMY ADAMS  
 DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS,  
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 Date: 2016.09.12 08:35:29 -0400

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h1 style="margin: 0;">EPA</h1> </div> <div style="text-align: center;"> <p>United States Environmental Protection Agency Washington, DC 20460</p> <h2 style="margin: 0;">Work Assignment</h2> </div> </div>		<p>Work Assignment Number 3-36</p> <p><input type="checkbox"/> Other    <input type="checkbox"/> Amendment Number:</p>																																																																		
<p>Contract Number EP-C-13-039</p>	<p>Contract Period   09/11/2013   To   07/31/2017</p> <p>Base                      Option Period Number                      3</p>	<p>Title of Work Assignment/SF Site Name Ecosystem Services</p>																																																																		
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<p>SFO <input type="checkbox"/> (Max 2)</p> <p style="text-align: center; font-size: small;">Note: To report additional accounting and appropriations date use EPA Form 1900-69A.</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>Line</th> <th>DCN (Max 6)</th> <th>Budget/FY (Max 4)</th> <th>Appropriation Code (Max 6)</th> <th>Budget Org/Code (Max 7)</th> <th>Program Element (Max 9)</th> <th>Object Class (Max 4)</th> <th>Amount (Dollars)</th> <th>(Cents)</th> <th>Site/Project (Max 8)</th> <th>Cost Org/Code</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code	1											2											3											4											5										
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<p>Digitally signed by TAMMY ADAMS DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=TAMMY ADAMS, dnQualifier=0000018417 Date: 2016.08.10 13:38:07 -0400</p>																																																																				

## WORK ASSIGNMENT

**I. Title:** Ecosystem Services

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-36

**III. Estimated Period of Performance:** Date of Issuance through July 31, 2017

**IV. Estimated Level of Effort:** 245 hours

**V. Key EPA Personnel:**

**Work Assignment Contracting Officers Representative (WACOR):**

Joel Corona  
OW/IO/WPS (4101M)  
202/564-0006  
202/564-0500 (fax)

**Alternate WACOR:**

Michael Trombley  
OW/IO/WPS (4101M)  
202/564-3906  
202/564-0500 (fax)

**VI. Background and Purpose:**

The 1972 Clean Water Act (CWA) directs the Environmental Protection Agency (EPA or Agency) to develop national technology-based regulations for categories of industries that discharge pollutants directly to surface waters (effluent guidelines (ELGs)) or that discharge pollutants indirectly through sewage treatment plants (pretreatment standards). The CWA also directs EPA to develop national technology-based regulations for new industrial facilities (new source performance standards).

Under Executive Orders 12866 and 13563, EPA is required to estimate the potential benefits and costs to society. As such, the purpose of this Work Assignment (WA) is to support the development of tools that can be used to provide such estimates. For example, when identifying, quantifying, and valuing ecosystem services, the National Ecosystem Services Classification System (NESCS) is a classification framework that can assist in identifying final ecosystem services for subsequent quantification and valuation.

In carrying out the tasks specified in this work assignment, the contractor may be called upon to build upon and continue work performed under WA 2-36 under this Contract EP-C-13-039. The work performed under this work assignment will not duplicate work conducted under previous

work assignments.

## **VII. General Requirements of the Work Assignment and Schedule**

Confidential Business Information: During the course of the work assignment, the contractor is not expected to be accessing and evaluating confidential business information (CBI). However, if the contractor does access or evaluate CBI, the contractor shall adhere to EPA's CBI policy and other procedures as described in the contract clauses (Clauses H.15-H19 and H.21). The contractor must maintain CBI security clearance to use CBI information. The contractor shall not disclose any CBI to anyone other than EPA without prior written approval from the EPA WACOR. The contractor shall, at all times, adhere to Confidential Business Information (CBI) procedures when handling industry information. The contractor shall manage all reports, documents, and other materials and all draft documents developed under this work assignment in accordance with the procedures set forth in our "Office of Science and Technology Confidential Business Information Application Security Plan" (August 2011) or its successor approved plans.

Budget Reporting: The contractor under this work assignment is required to report to the EPA WACOR when 75 percent of the total work assignment funding amount has been depleted. The contractor must also report to the EPA WACOR when 75 percent of the approved Work plan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor shall refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA Contract Level Contracting Officer Representative (CL-COR), and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: EPA does not anticipate the need for non-local travel by contractor employees and/or subcontractors to support the scope of this work assignment.

Deliverable Formatting: All memos, draft comments, summaries and responses, and chapters are



to be provided in hard copy and in electronic form using Word and/or Excel/Access, ArcView, or, in special cases another software program agreed to by EPA. Memos are to be written in a manner which will make them easy to turn into draft chapters for the Final Report. For deliverables that are in Word or pdf versions of Word documents, that are intended to be shared with management or the public, the contractor shall use decimal align in all tables containing columns of numbers of varying digits, whether decimal places are reported or not. All final materials, e.g., memos, chapters, etc. are to be prepared only after receiving written technical direction from the EPA WACOR.

## **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the EPA WACOR's comments.

### **Task 1 - Prepare Work Plan (20 hours estimated LOE)**

The contractor shall prepare a work plan within 15 calendar days of receipt of the work assignment signed by the Contracting Officer. The work plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the CL-COR and the CO will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised work plan incorporating the CO's comments, if required.

A biweekly update call with the EPA WACOR will be required for this work assignment to discuss progress on deliverables, costs, and other potential issues.

### **Deliverables and schedule under Task 1**

- 1a. Work plan within 15 calendar days of receipt of work assignment.**
- 1b. Biweekly update call.**

### **Task 2 - Provide Technical Support for the National Ecosystem Services Classification System (NESCO) (225 hours estimated LOE)**

The contractor shall provide technical support related to the NESCO and other ecosystem services research activity. NESCO is being developed under joint direction from EPA's Office of Research and Development (ORD) and EPA's Office of Water (OW). In addition, EPA's Office of Air and Radiation (OAR) has announced interest in using a NESCO framework/approach in future rulemaking (Secondary National Ambient Air Quality Standards (NAAQS) for nitrogen oxides/sulfur oxides (NOx/SOx)). EPA is interested in better understanding the usefulness of NESCO and other ecosystem services research activities for benefits analysis. Under this task, the contractor will provide technical support in the form of 2-3 memoranda or other technical documents. Examples *could* include:

- Memorandum on when to best use NESCS, and recommendations on improvements to the classification system
- Comparison of the Final Ecosystem Goods and Services-Classification System (FEGS-CS) and NESCS approaches, including recommendations on when (if) one approach is more appropriate
- Case Study applying NESCS to an existing or future policy scenario
- Memorandum on whether the National Aquatic Resource Surveys (NARS) program could collect information useful to NESCS, other ecosystem services work, or benefits analysis in general
- Recommendations and/or support on how to incorporate NESCS categories into databases (such as the ELG database or EPA's EnviroAtlas)
- Application of NESCS and/or other classification systems to environmental/green accounting

Additional support may include responding to management questions about economic issues, preparing briefing and meeting materials (which may include but are not limited to short briefing documents and PowerPoint presentations). The contractors may also be directed to participate in and/or conduct briefings, assisting Agency economists in their review of analyses conducted by EPA and its contractors, and providing technical review of materials prepared by Agency staff.

The contractor shall prepare draft deliverable material for EPA WACOR review and approval.

Once the EPA WACOR reviews the draft materials and provides revisions and/or comments to the contractor, the contractor shall prepare a final version of the materials incorporating the EPA WACOR's comments.

## **Deliverables and schedule under Task 2**

- 2a. Draft deliverables and due dates to be determined by written technical direction.**
- 2b. Final deliverable due dates to be determined by written technical direction.**

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 3-36								
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001								
Contract Number EP-C-13-039	Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number      3	Title of Work Assignment/SF Site Name Ecosystem Services								
Contractor ABT ASSOCIATES INC.		Specify Section and paragraph of Contract SOW A.2.2, A.6, B.6, C								
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From   08/10/2016   To   07/31/2017								
Comments: This is an administrative amendment to determine if a patch to FedConnect resolved an issue which stopped the WA from being submitted via FedConnect. No actions are required by the Contractor.										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
09/11/2013   To   07/31/2017										
This Action:										
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:		Cost/Fee		LOE:						
Cumulative Approved:		Cost/Fee		LOE:						
Work Assignment Manager Name   Joel Corona							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>							Phone Number: 202-564-0006			
							FAX Number:			
Project Officer Name   Ahmar Siddiqui							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>							Phone Number: 202-566-1044			
							FAX Number:			
Other Agency Official Name							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>							Phone Number:			
							FAX Number:			
Contracting Official Name   Tammy Adams							Branch/Mail Code:			
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>							Phone Number: 513-487-2030			
							FAX Number: 513-487-2545			

TAMMY ADAMS

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 cn=TAMMY ADAMS, dnQualifier=0000018417  
 Date: 2016.08.11 14:13:19 -04'00'

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-36				
						<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001				
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number      3			Title of Work Assignment/SF Site Name Ecosystem Services				
Contractor ABT ASSOCIATES INC.					Specify Section and paragraph of Contract SOW A.2.2, A.6, B.6, C					
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval					Period of Performance  From   08/11/2016   To   07/31/2017					
Comments:										
<input type="checkbox"/> Superfund    Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
SFO <input type="checkbox"/> (Max 2)    Note: To report additional accounting and appropriations date use EPA Form 1900-69A.										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee: \$0.00		LOE: 0						
09/11/2013 To 07/31/2017										
This Action:		\$29,003.00		245						
Total:		\$29,003.00		245						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:		08/24/2016		Cost/Fee \$29,003.00		LOE: 245				
Cumulative Approved:				Cost/Fee \$29,003.00		LOE: 245				
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<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 202-564-0006				
						FAX Number:				
Project Officer Name   Ahmar Siddiqui						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 202-566-1044				
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Other Agency Official Name						Branch/Mail Code:				
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						FAX Number:				
Contracting Official Name   Tammy Adams						Branch/Mail Code:				
<div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="display: flex; justify-content: space-between;"><span>(Signature)</span><span>(Date)</span></div>						Phone Number: 513-487-2030				
						FAX Number: 513-487-2545				

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<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-37			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-13-039			Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3			Title of Work Assignment/SF Site Name RSEI Model Update Tech Support			
Contractor ABT ASSOCIATES INC.				Specify Section and paragraph of Contract SOW A.2.4, B1, B2, B4, C3, C7, D2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval				Period of Performance  From   01/19/2017   To   07/31/2017					
Comments:									
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund									
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.									
SFO <input type="checkbox"/> (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)  (Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee:		LOE:					
09/11/2013 To 07/31/2017				0					
This Action:				866					
Total:				866					
Work Plan / Cost Estimate Approvals									
Contractor WP Dated:				Cost/Fee		LOE:			
Cumulative Approved:				Cost/Fee		LOE:			
Work Assignment Manager Name    Wayne Davis						Branch/Mail Code:			
_____ (Signature)						_____ (Date)			
						Phone Number: 410-305-3030			
						FAX Number:			
Project Officer Name    Ahmar Siddiqui						Branch/Mail Code:			
_____ (Signature)						_____ (Date)			
						Phone Number: 202-566-1044			
						FAX Number:			
Other Agency Official Name    Guy Tomassoni						Branch/Mail Code:			
_____ (Signature)						_____ (Date)			
						Phone Number: 202-566-1937			
						FAX Number:			
Contracting Official Name    Tammy Adams						Branch/Mail Code:			
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						Phone Number: 513-487-2030			
						FAX Number: 513-487-2545			

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 ADAMS, dnQualifier=0000018417  
 Date: 2017.01.19 07:20:11 -05'00'

## WORK ASSIGNMENT

**I. Title:** Risk Screening Environmental Indicators Model Update and Technical Support

**Contractor:** Abt Associates

**Contract No.:** EP-C-13-039

**II. Work Assignment Number:** 3-37

**III. Estimated Period of Performance:** Date of issuance through July 31, 2017

**IV. Estimated Level of Effort:** 866 hours

**V. Key EPA Personnel:**

**Work Assignment Contracting Officer Representative (WACOR):**

Wayne Davis

OCSPP/OPPT/TRIPD

202/566-2425

443/283-4080 (fax)

### **VI. Background and Purpose:**

The 1972 Clean Water Act (CWA) directs the Environmental Protection Agency (EPA or Agency) to develop national technology-based regulations for categories of industries that discharge pollutants directly to surface waters (effluent guidelines) or that discharge pollutants indirectly through sewage treatment plants (pretreatment standards). The CWA also directs EPA to develop national technology-based regulations for new industrial facilities (new source performance standards).

Under Executive Orders 12866 and 13563, EPA is required to estimate the potential benefits and costs to society. As such, the purpose of this Work Assignment (WA) is to provide contractor support for the continued development and upgrading of the Risk-Screening Environmental Indicators (RSEI) Model, updating it to reflect Toxic Release Inventory (TRI) data through 2016, further enhancing the model where applicable and its documentation, providing technical support to its users, and development of relevant analyses using RSEI. **This WA covers the preliminary steps to the full production of the 2016 RSEI results, which may be developed in a future WA.**

The objective of the RSEI project is to develop a set of risk-based indicators, which provide additional information and context to help users understand the data in the TRI. The RSEI Model contains Indicators Elements -- numeric relative ranking values that assess the risk-related impacts of chemical releases on human health and ecological well-being. The RSEI Model is useful for examining trends in risks from chemical releases, ranking and prioritizing chemicals for strategic planning, performing risk-related targeting for enforcement and compliance

purposes, and supporting community-based environmental protection efforts.

Under this WA, the contractor shall conduct all analyses requiring the collection and manipulation of data and models in accordance with the EPA approved quality assurance project plan (QAPP) that will be based on Task 2 QAPP language. The QAPP shall describe the procedures for assuring the quality of the primary and existing environmental and economic data used for this work assignment.

In carrying out the tasks specified in this work assignment, the contractor may be called upon to build upon and continue work performed under WA #2-37 under this Contract EP-C-13-039, and WAs #6-18 and 7-18 under Contract EP-W-08-010, WAs 4-79 and 4-105 under Contract EP-W-11-003. The work performed under this work assignment will not duplicate work conducted under the previous work assignments.

Under the previous work assignment(s), Abt Associates performed the following analyses:

- ▶ Model updates and data refresh for Record Year 2013, 2014, and 2015
- ▶ Education and outreach involving updating the RSEI microsite, use cases, and training videos
- ▶ Technical support for EPA and other users of the RSEI results

## **VII. General Requirements of the Work Assignment and Schedule**

Confidential Business Information: During the course of the work assignment, the contractor will not be accessing and evaluating CBI.

Budget Reporting: The contractor under this work assignment is required to report to the EPA WACOR and Contract-Level Contracting Officers Representative (CL-COR) when 75 percent of the total work assignment funding amount has been depleted. The contractor must also report to the EPA WACOR when 75 percent of the approved Work plan budget has been depleted.

Identification as Contracting Staff: To avoid the perception that contractor personnel are EPA employees, contractor personnel shall be clearly identified as independent contractors of EPA when participating in events with outside parties and prior to the start of any meeting. Contractor personnel are prohibited from acting as the Agency's official representative. When speaking with the public, the contractor shall refer all interpretations of policy to the EPA WACOR.

Limitation of Contractor Activities: The contractor shall submit drafts of all deliverables to the EPA WACOR for review prior to submission of the final product. These drafts will clearly specify the methods, procedures, considerations, assumptions, relevant citations, data sources and data that support any conclusions and recommendations. The contractor shall incorporate all EPA WACOR comments into all final deliverables, unless otherwise agreed upon by the EPA WACOR. The contractor shall adhere to all applicable EPA management control procedures as implemented by the EPA Contracting Officer (CO), EPA CL-COR, and EPA WACOR.

Quick Response: Under this Performance Work Statement the contractor may be required to

provide information for use by EPA for quick responses and analyses of options, issues, and policy decisions. Quick responses are those which require completion in one to five working days.

Travel: EPA does not anticipate the need for non-local travel by contractor employees and/or subcontractors to support the scope of this work assignment.

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## **VIII. Performance Work Statement**

The EPA WACOR will review all deliverables in draft form and provide revisions and/or comments to the contractor. The contractor shall prepare the final deliverables incorporating the EPA WACOR's comments.

### **Task 1 - Prepare Work Plan**

The contractor shall prepare a work plan within 15 calendar days of receipt of a work assignment signed by the CO. The work plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the CL-COR and the CO will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised work plan incorporating the CO's comments, if required.

A weekly update memo to the EPA WACOR will be required for this work assignment to provide progress on deliverables, any cost issues, and other potential issues.

### **Deliverables and schedule under Task 1**

**1a. Work plan within 15 calendar days of receipt of work assignment.**

**1b. A weekly update memo to the EPA WACOR to provide progress on deliverables, any cost issues, and other potential issues.**

## **Task 2 Quality Assurance**

### **2.1 Background**

Quality Assurance Project Plans (QAPPs) are required under the Agency's Quality Assurance



Policy CIO-2105, formerly EPA Order 5360.1 A2 (May 2000), and implementing guidance CIO-2105-P-01-0 (May 2000). All projects that involve the generation, collection, analysis and use of environmental data must have an EPA approved QAPP in place prior to the commencement of the work. Examples of these environmental data operations are provided in **Table 2-1** below.

**Table 2-1. Examples of work that involves the collection, generation, evaluation, analysis, or use of environmental data**

Item	Examples
Data	Includes field sampling information (sample location information, flow measurements, temperature, pH, physical observations, etc.), laboratory measurements (e.g., chemical, physical, biological, radiological measurements), data collected from questionnaires, economic data, census data, and any other types of existing data (i.e., data generated for a different purpose or generated by a different organization)
Data generation	Includes field studies, laboratory studies, and generation of modeling output
Data collection	Includes field surveys, questionnaire surveys, literature searches, and third party data
Data evaluation	Includes data inspection, review, assessment, and validation
Data analysis	Includes statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models; database creation, data extraction and data manipulation
Data Use	Any use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, 304(m) program, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs)

Note that QAPPs are required for the development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. (A model is set of equations and assumptions used to predict unknown data.) When existing models are used as a tool to generate or evaluate data, the project QAPP must describe the model and explain how it will be used and how its output will be evaluated to ensure the modeling effort meets the overall quality objectives for the project. Development or revision of new models also must be supported by a QAPP that describes the objectives for the model, the quality criteria that will be applied to the model, and the procedures for evaluating whether the model meets those criteria.

## **2.2 QA Project Plan Requirements**

The activities in this work assignment involve gathering, evaluating, analyzing, and otherwise using existing environmental data (also known as “secondary” use of data). Therefore, the Contractor must prepare a QAPP that describes the work to be performed, how it will be done, and specific QA strategies that will be used when gathering and using the data to support the objectives of this work assignment. The QAPP shall provide enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered when using existing data to populate the Risk-Screening Environmental Indicators (RSEI) model, conduct the fate and transport modeling associated with RSEI, and produce risk-screening scores based on the data and modeling.
- The type of data to be gathered or used under this work assignment to support the project objectives—including data from search engines, federal databases, EPA data bases—as a well as a rationale for when those databases are appropriate and what data available in each will support the project

- The quality objectives needed to ensure the data will support the project objectives, and
- The quality assurance/quality control (QA/QC) activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

### ***2.3 QA Documentation Required***

The EPA Quality Manual for Environmental Programs (CIO 2105-P-01-0, May 2000) requires published Agency reports containing environmental data to be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their originally intended application. The EPA Quality Manual further requires Agency reports to be reviewed by the QA manager (or other authorized official) before publication to ensure that an adequate discussion of QA and QC activities is included. The purpose of the review is to ensure the reports provide enough information to enable a knowledgeable reader to determine if the technical and quality goals were met for the intended use of the data. Reports should include applicable statements regarding the use of any environmental data presented as a caution about possible misuse of the data for other purposes. For example, a Technical Support Document or Study Report must include a clear discussion of the quality management strategies (including the project goals and objectives, quality objectives and criteria, and QA/QC practices) that were employed to control and document the quality of data generated and used. These documents should also discuss any deviations from procedures documented in the EPA-approved QAPP(s) supporting the project, the reasons for those deviations, any impact of those deviations had on data quality, and steps taken to mitigate data quality issues.

In support of this Agency requirement, all major deliverables (e.g., Technical Support Documents, Study Reports, Analytical Methods) produced by the Contractor under this work assignment must include a discussion of the QA/QC activities that were performed to support the deliverable, and this discussion must provide a sufficient level of detail to allow the EPA QA Manager (or designee) to determine if the QA/QC strategies implemented for the project sufficiently support the intended use of the data. Upon receipt, the EPA WACOR will review each applicable report and certify whether the Contractor has adhered to the QA requirements documented in the Contractor's QAPP.

The Contractor also shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the QAPP, and corrective actions taken. If desired, the Contractor may include this as a part of the contract-required monthly financial/technical progress report.

### ***2.4 QAPP Schedule***

Within 15 days after submittal of the work plan, the Contractor shall prepare and submit a QAPP. EPA will review the submitted QAPP and provide the Contractor with written approval or comments within 15 days of receiving the Contractor's submission. The Contractor shall revise the submitted QAPP within 10 days of receipt, unless otherwise instructed by the EPA WACOR.

Until the QAPP is fully approved, the Contractor must not perform any activities that involve

gathering, evaluating, analyzing, and otherwise using existing environmental data. The QAPP shall be kept up to date and revised as needed

## ***2.5 Data Quality Act/Information Quality Guidelines Requirements***

The Data Quality Act (also known as the Information Quality Act) requires EPA to ensure that influential information disseminated by the Agency is sufficiently transparent in terms of data and methods of analysis that the information is capable of being substantially reproduced. To support compliance with these data transparency/data reproducibility requirements, EPA plans to include QAPPs as part of any rulemaking record documentation to be made available to the public. The Contractor may claim information in QAPPs as confidential; if the Contractor chooses to do so, the Contractor shall submit a sanitized (i.e., public) version and an unsanitized (i.e., confidential) version at the time the QAPP is submitted for approval by EPA. The sanitized version shall be included in the public docket for the applicable rulemaking (or other docket record), and the unsanitized version shall be included in a non-public (i.e., confidential) portion of the docket (or record).

Information contained in the approved QAPP shall be transparent and reproducible and meet the requirements of the Data Quality Act for influential information. EPA's *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency* (EPA/260R-02-008, October 2002), referred to as "EPA's Information Quality Guidelines," describe EPA procedures for meeting Data Quality Act requirements. Section 6.3 of EPA's Information Quality Guidelines indicate that "especially rigorous robustness checks" should be applied in circumstances where quality-related information cannot be disclosed due to confidentiality issues. Where applicable, the Contractor should indicate which results were obtained using the tools (standard operating procedures, checklists, and guidelines) that the Contractor designates as confidential so that the EPA WACOR can easily identify the areas that shall require rigorous robustness checks and document that those checks have been performed.

## ***2.6 Deliverables and Schedule Under Task 2.***

<b>Deliverable</b>	<b>Projected Schedule Date</b>
Draft QAPP	Within 15 days after submittal of the Work Plan
Revised QAPP reflecting EPA comments, if needed	Within 10 days of receipt of EPA comments on initial submission
Monthly reports of QA work performed (may be included in the Contractor's monthly progress report)	Monthly throughout the WA period of performance

## **Task 3 - Prepare Standardized Naming Convention and Version Control Memorandum**

The contractor shall adhere to the EPA WACOR approved standardized naming convention and version control (SNCVC) plan that was developed under the Construction and Development WA 0-01 of the contract EP-C-07-023 (WA0-01\_T1\_SNCVC\_08.31.07\_V1.pdf). The contractor shall use this standardized convention for all deliverables associated with this work assignment.

The EPA WACOR may request the contractor through written technical direction to amend the SNCVC memorandum at any point under this WA. The EPA WACOR will review the revised memorandum and then provide the contractor with written notification of approval or edits that need to be made. The contractor shall prepare the edited SNCVC memorandum incorporating the EPA WACOR's comments, if required. After receiving notification of approval the contractor shall use the revised SNCVC.

### **Deliverables and schedule under Task 3**

If required, via technical direction revise memorandum within 3 calendar days of receipt of comments from the EPA WACOR.

### **Task 4: RSEI Model Upgrades**

Model modifications may be required to accept the new TRI data and supporting data sets. Specific model enhancements to the existing version 2.3.5 model will be described at the request of the EPA WACOR, which may include adding year-specific weather data into the modeling process and evaluating toxicity-weighting methodologies including those used by the National Air Toxics Assessment (NATA).

### **Deliverables and schedule under Task 5**

**4a.** RSEI Model Upgrade status memo no later than May 1, 2017.

**4b.** RSEI Model Upgrade no later than July 28, 2017.

### **Task 5 - Geographic Microdata and Associated Products**

Under previous WAs documented in the background section of this performance work statement, disaggregated model results known as RSEI Geographic Microdata have been produced and distributed to the public. For this task, the contractor shall provide State-specific block-group ARCGIS Shape files to support EPA to increase the accessibility of the RSEI Geographic Microdata. This task may also include writing application program interfaces (APIs) for the data, creating additional data files, and creating user interfaces for data visualization and manipulation.

### **Deliverables and schedule under Task 5**

**5.** Updated microdata products no later than July 28, 2017.

### **Task 6 – EasyRSEI and Associated Products**

Under previous WAs documented in the background section of this performance work statement, the RSEI website (including the EasyRSEI help), EasyRSEI installation files and instructions, and any version-specific information have been completed. The contractor shall create a Qlik Dashboard containing RSEI results and prepare a memo evaluating using the Qlik Dashboard to replace the current EasyRSEI interface.

### **Deliverables and schedule under Task 6**

**6a.** Draft of the Qlik Dashboard no later than July 14, 2017

**6b.** Final of the Qlik Dashboard no later than July 28, 2017

### **Task 7 - Program and User Technical Support and Auxiliary Analyses**

Various types of RSEI technical support and analysis are needed by users of the model. The contractor shall support EPA in the preparation of supplementary analyses or presentations related to the RSEI model. The results of analyses performed under this Task shall be described in memoranda or presentations provided by the contractor to the EPA WACOR. The EPA WACOR will designate the topics to be addressed through technical direction. These analyses will be conducted if resources allow.

Examples of possible activities under this task include:

- Providing RSEI model results for the latest update of the TRI National Analysis.
- Using the RSEI water model to generate toxicity-weighted concentration for stream reaches using facility release data to support EJScreen.
- Comparisons of the RSEI methodology with alternative ranking methods. The contractors shall describe the strengths and weakness of each approach.
- Ranking of facilities by state or other geographic boundary. The contractor shall provide lists of these facilities to the WACOR, as well as providing a memo or report that contains summary information about the facilities, such as the chemicals of concern, their releases and transfers of chemicals, their geographic distribution, etc.
- Identification of sources of discrepancies or interpretation of results. Development of patches to correct problems in results.
- Environmental justice analyses identifying disparate risk-related impacts by race, income, and age using geographic microdata.
- Comparisons of RSEI results throughout the years and analyses of trends.
- Graphs and trend results broken out by hazard, cancer hazard, non-cancer hazard or other similar break outs.
- Uncertainty (sensitivity) analysis that identifies RSEI drivers and potential areas for future refinement.
- Presentations describing the RSEI modeling approach or other aspects related to RSEI.

The exact topics and mix of auxiliary analyses cannot be known at this time. The analyses will address issues that arise during the course of various EPA activities relating to Indicator topics and require a quick response. The results of the analyses performed under this task shall be described in memoranda or reports provided by the contractor to the EPA WACOR, and revised to respond to comments by the EPA WACOR. If any analysis is not addressed in the QAPP, then the QAPP must be revised to reflect these analyses.

#### **Deliverables and schedule under Task 7**

**7a.** Draft product no later than 3 weeks following technical direction describing the analysis.

**7b.** Final product no later than one week after comments received by the WACOR.

#### **Summary of Deliverables and Dates:**

1a. Work plan within 15 calendar days of receipt of work assignment.

1b. A weekly update memo to the EPA WACOR to provide progress on deliverables, any cost issues, and other potential issues.

2a. QAPP within 15 days after submittal of the Work Plan.

2b. Revised QAPP within 10 days of receipt of EPA comments on initial submission working days of receipt of any comments from the WACOR.

2.c Monthly reports of QA work performed (may be included in the Contractor's monthly progress report).

3. If required, revised memorandum within 3 calendar days of receipt of comments from the EPA WACOR, at technical direction of EPA WACOR.

4a. RSEI Model Upgrade status memo no later than May 1, 2017.

4b. RSEI Model Upgrade no later than July 28, 2017.

5. Updated microdata products no later than July 28, 2017.

6a. Draft of the Qlik Dashboard no later than July 14, 2017

6b. Draft of the Qlik Dashboard no later than July 28, 2017

7a. Draft product no later than 3 weeks following technical direction describing the analysis.

7b. Final product no later than one week after comments received by the WACOR.

**EPA**United States Environmental Protection Agency  
Washington, DC 20460**Work Assignment**

Work Assignment Number

3-37

☐ Other ☐ Amendment Number:Contract Number  
EP-C-13-039

Contract Period 09/11/2013 To 07/31/2017

Title of Work Assignment/SF Site Name

Base

Option Period Number 3

RSEI Technical Support

Contractor

ABT ASSOCIATES INC.

Specify Section and paragraph of Contract SOW

Section VI. Paragraphs 1 and 2

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 01/19/2017 To 07/31/2017

Comments:



Superfund

## Accounting and Appropriations Data



Non-Superfund

SFO  
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

## Authorized Work Assignment Ceiling

Contract Period:

09/11/2013 To 07/31/2017

Cost/Fee: \$0.00

LOE: 0

This Action:

\$99,878.00

866

Total:

\$99,878.00

866

## Work Plan / Cost Estimate Approvals

Contractor WP Dated:

02/01/2017

Cost/Fee \$99,878.00

LOE: 866

Cumulative Approved:

Cost/Fee \$99,878.00

LOE: 866

Work Assignment Manager Name Wayne Davis

Branch/Mail Code:

Phone Number: 410-305-3030

FAX Number:

(Signature)

(Date)

Project Officer Name Ahmar Siddiqui

Branch/Mail Code:

Phone Number: 202-566-1044

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Tammy Adams

Branch/Mail Code:

Phone Number: 513-487-2030

FAX Number: 513-487-2545

(Signature)

(Date)

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 3-39								
		<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-13-039	Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3	Title of Work Assignment/SF Site Name Economic Analyses for Californ								
Contractor ABT ASSOCIATES INC.		Specify Section and paragraph of Contract SOW A.2.2								
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance  From   10/24/2016   To   07/31/2017								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
09/11/2013   To   07/31/2017				0						
This Action:				350						
Total:				350						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name   Ghulam Ali						Branch/Mail Code:				
_____ (Signature)						_____ (Date)				
						Phone Number: 202-566-1004				
						FAX Number:				
Project Officer Name   Ahmar Siddiqui						Branch/Mail Code:				
_____ (Signature)						_____ (Date)				
						Phone Number: 202-566-1044				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)						_____ (Date)				
						Phone Number:				
						FAX Number:				
Contracting Official Name   Tammy Adams						Branch/Mail Code:				
_____ (Signature)						_____ (Date)				
						Phone Number: 513-487-2030				
						FAX Number: 513-487-2545				



**Performance Work Statement  
EPA Contract No., EP-C-13-039  
Work Assignment # 3-39**

**TITLE: Economic Analyses for California Statewide Water Quality Plans**

**I. Work Assignment Contracting Officer's Representative (WACOR)**

Ghulam Ali  
Standards and Health Protection Division  
Office of Science and Technology  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Email [ali.ghulam@epa.gov](mailto:ali.ghulam@epa.gov)  
Phone: 202-566-1004

**II. Alternative Work Assignment Contracting Officer's Representative (ALT WACOR)**

Matthew Mitchell  
U.S. EPA Region 9  
Water Quality Assessment Section (WTR-2-1)  
75 Hawthorne Street  
San Francisco, CA 94105

Email: [Mitchell.Matthew@epa.gov](mailto:Mitchell.Matthew@epa.gov)  
Phone: 415-972-3508

**III. Level of Effort**  
350

**IV. Duration**  
Date of Issuance to July 31, 2017

**V. DESCRIPTION**

This is a follow on to work assignment no. 2-39 to complete policies regarding bacteria and methyl mercury for California which were not developed. The State Water Resources Control Board (the Board) was able to develop only the draft policy about toxicity towards the end of the performance period, but was unable to gather the information about test needed to estimate the cost of the policy/objective in a timely fashion. Relatively late in July 2016, the Board was able to provide the required cost data of whole effluent toxicity test. As a result, the contractor could not finish the economic analysis even for the toxicity policy and no output was generated. However, the contractor updated the baseline, reviewed the facility permits and

revised the toxicity limits according to the proposed policy in order to update the economic analysis. The Board planned to finalize the draft policies regarding methyl mercury and the bacteria in this work assignment. As a result, this follow up work assignment includes the work which was not completed before. The contractor shall use the previously prepared quality assurance project plan (QAPP).

The Clean Water Act (CWA) directs States, with oversight by the U.S. Environmental Protection Agency (US EPA) to adopt water quality standards to protect the public health and welfare, enhance the quality of water, and serve the purposes of the act. State standards must include (1) designated uses for all water bodies within their jurisdictions, (2) water quality criteria (referred to as objectives under California law) sufficient to protect the most sensitive of the uses, and (3) an antidegradation policy. States are also required to review their standards once every three years and, as appropriate, modify and adopt standards. The results of this triennial review must be submitted to US EPA and US EPA must approve or disapprove any new or revised standards. Section 303(c) of the CWA directs US EPA to promulgate standards where US EPA has determined that a new or revised standard is not consistent with the requirements of the CWA, or where necessary to meet the requirements of the CWA.

Through the triennial review process, in roundtable discussions and in discussions with US EPA Region 9 staff, it was determined that several standards need to be modified and/or adopted in California. The State Board is taking the approach that adopting statewide standards is an efficient use of limited resources and is presently in the process of developing water quality standards for the following pollutants:

1. Development of Methylmercury Fish Tissue Objectives and Implementation Policy
2. Development of a Statewide Methyl Mercury Reservoir Control Program total maximum daily loadings (TMDL)
3. Update Economic Analysis for Statewide Toxicity Policy
4. Development of Statewide bacteria objectives and program of implementation

The following are individual descriptions of each of the above listed projects:

#### 1 & 2. Development of Methylmercury Fish Tissue Objectives and Implementation Policy and TMDL for Mercury in Reservoirs

The Board is considering adopting a statewide policy for methylmercury that would apply to inland waters, enclosed bays, and estuaries in the State. Based on the US EPA's revised methylmercury (MeHg) fish tissue-based criteria guidance, elements of the proposed policy may include a methylmercury fish tissue objective and implementation procedures related to the Board's regulatory program. As a parallel project the state is developing a statewide reservoir TMDL and program of implementation that is intended to address lakes currently listed for mercury and hopefully will be able to contain implementation methods that would address any additional lakes that are found to have elevated levels of Mercury in fish tissue in the future. The TMDL will establish Fish Tissue objectives for reservoirs and set target and loads.

Timeline: Both projects are currently underway and we anticipate adoption of the objectives in approximately 18 months and the TMDL in 24 months.

### 3. Toxicity Policy – Update of Draft Economics Policy

The Board has developed a draft policy for Toxicity Assessment and Control. A draft economics analysis was prepared using an early draft of the policy before the final US EPA statistical methods (the “Test of Significant Toxicity”) was released. Due to changes in the draft policy a revision to the economics analysis is needed. Updates should include the cost to Storm Water, Channelized dischargers as well as for publically owned treatment works (POTWs). Factors to consider would include costs for routine monitoring as defined in the draft Policy (including courier costs as appropriate) and costs for accelerated monitoring.

Timeline: Draft Substitute Environmental Documentation (SED) in approximately 2 months

### 4. Bacteria Objectives

The Board is working to adopt the 2012 recommended 304(a) updated bacteria criteria as well as a program of implementation. While the update is replacing more or less equivalent total or fecal coliform objectives it will also contain several implementation measures. They are likely to include a reference beach approach allowance for TMDLs, an allowance for the development of high-flow suspensions and definition of a limited contact recreation beneficial use. The proposed update will likely not impact sewage treatment plants as they are already meeting a more stringent total coliform effluent limit. However, there could be costs to Storm Water and other non-point source dischargers as well as the communities should a lower illness rate be chosen and additional beach closure days are incurred.

Timeline: SED in approximately 4 months

## **Task 1: Prepare Work Plan and Cost Estimates**

The contractor shall prepare the work plan and cost estimates for the tasks below. The work plan shall outline, describe and include the technical approach, resources, timeline and due dates for deliverables, a detailed cost estimate by task, and a staffing plan. The EPA WACOR, the Contract-Level Contracting Officer Representative (CL-COR), and the Contracting Officer (CO) will review the work plan. However, only the CO can approve/disapprove, suggest revisions, or change the work plan. Official revisions will be given to the contractor by the CO. The contractor shall prepare a revised work plan incorporating the CO’s comments, if required.

## **Task 2: Prepare a Quality Assurance Plan for Literature Search, Data Collection and Analyses**

The contractor shall use the Programmatic QAPP (PQAPP) used under the previous work assignment, 2-39, for the literature search, data collection, and analyses to be conducted under this work assignment. The following provides the details of quality assurance.

## Quality Assurance (QA)

### 2.1 Background

Quality Assurance Project Plans are required under the Agency's Quality Assurance Policy CIO-2105, formerly EPA Order 5360.1A2 and implementing guidance CIO-2105-P-01-0. All projects that involve the generation, collection, analysis and use of environmental data must have an approved Quality Assurance Project Plan (QAPP) in place prior to the commencement of the work. Examples of these environmental data operations are provided in Table 1-1 below.

**Table 1-1. Examples of work that involves the collection, generation, evaluation, analysis, or use of environmental data.**

Item	Examples
Data	Includes field sampling information (sample location information, flow measurements, temperature, pH, physical observations, etc.), laboratory measurements (e.g., chemical, physical, biological, radiological measurements), data collected from questionnaires, economic data, census data, and any other types of existing data (i.e., data generated for a different purpose or generated by a different organization)
Data generation	Includes field studies, laboratory studies, and generation of modeling output
Data collection	Includes field surveys, questionnaire surveys, literature searches, and third party data
Data evaluation	Includes data inspection, review, assessment, and validation
Data analysis	Includes statistical, engineering, and economic analysis, and testing, evaluation, and validation of methods and models; database creation, data extraction and data manipulation
Data Use	Any use of data to support EPA decisions, regulations, policy, publications, or tools (including effluent guidelines, 304(m) program, standards, environmental assessments, and models, tools, or reports disseminated by EPA to assist other organizations in implementing environmental programs)

Note, this work assignment does not anticipate development of new software or models to estimate the cost to the point and nonpoint sources to comply with the methyl mercury, toxicity and bacteria policy in California. As result, QAPPs does not require development or revision of models and software that support the generation, collection, evaluation, analysis, or use of data. (A model is set of equations and assumptions used to predict unknown data.) When existing models are used as a tool to generate or evaluate data, the project QAPP must describe the model and explain how it will be used and how its output will be evaluated to ensure the modeling effort meets the overall quality objectives for the project.

### 2.2 QA Project Plan Requirements

The contractor has previously prepared a contract-wide Programmatic QAPP (PQAPP) for Contract EP-C-13-039. This PQAPP describes, in a single document, information that is not site or time-specific, but applies throughout the program (i.e., the duration of the contract). When tasked with preparing the PQAPP, the contractor was informed that the PQAPP may need to be supplemented with project-specific details to support individual work assignments that involve the collection, generation, evaluation, analysis, or use of environmental data.

The activities in this work assignment involve gathering, evaluating, analyzing, and otherwise using existing environmental data (also known as “secondary” use of data). However, EPA has determined that the contractor is operating under the existing PQAPP and that the PQAPP addresses QA requirements for this work assignment. In support of this work assignment, the contractor shall ensure that the work plan provides enough detail to clearly describe:

- Specific objectives of the project(s) supported by this work assignment, including typical questions that must be answered when using existing sources of data to perform economic analyses in support of the policy regarding the methymercury, toxicity and bacteria in California.
- The type of data to be gathered or used under this work assignment to support the project objectives—including data from search engines, federal and state databases, EPA data bases, letters from industry—as a well as a rationale for when those sources are appropriate and what data available in each will support the project
- The quality objectives needed to ensure the data will support the project objectives, and
- The quality assurance/quality control (QA/QC) activities to be performed to ensure that any results obtained are documented and are of the type, quality, transparency, and reproducibility needed.

Table 1-2 at the end of this WA demonstrates how the PQAPP addresses QA requirements for this work assignment. The contractor shall fill in staff roles to the Table 1-2 under A.4 and make any additional detailed notes in the ‘explanatory comments’ column as requested by the WACOR. The contractor shall then include the completed Table 1-2 as a separate Appendix A to the work plan upon submittal to EPA. This Appendix A should be a stand-alone document if QA documentation is requested, therefore the Table 1-2 title must include the title of the WA, WA number, contract number, and what projects each covers. The WACOR has provided this information in the title, which the contractor may use to fulfill this requirement.

### ***2.3 Additional QA Documentation Required***

The EPA Quality Manual for Environmental Programs (CIO 2105-P-01-0, May 2000) requires published Agency reports containing environmental data to be accompanied by a readily identifiable section or appendix that discusses the quality of the data and any limitations on the use of the data with respect to their originally intended application. The EPA Quality Manual further requires Agency reports to be reviewed by the QA manager (or other authorized official) before publication to ensure that an adequate discussion of QA and QC activities is included. The purpose of the review is to ensure the reports provide enough information to enable a knowledgeable reader to determine if the technical and quality goals were met for the intended use of the data. Reports should include applicable statements regarding the use of any environmental data presented as a caution about possible misuse of the data for other purposes. For example, a technical support document or study report must include a clear discussion of the quality management strategies (including the project goals and objectives, quality objectives and criteria, and QA/QC practices) that were employed to control and document the quality of data generated and used. These documents should also discuss any deviations from procedures documented in the EPA-approved QAPP(s) supporting the project, the reasons for those

deviations, any impact of those deviations had on data quality, and steps taken to mitigate data quality issues.

In support of this Agency requirement, all major deliverables such as regulated entities (point and nonpoint sources), and technology cost estimates produced by the contractor under this work assignment must include a discussion of the QA/QC activities that were performed to support the deliverable, and this discussion must provide a sufficient level of detail to allow the Engineering and Analysis Division (EAD) QA Coordinator (or designee) to determine if the QA/QC strategies implemented for the project sufficiently support the intended use of the data. Upon receipt, the EPA WACOR will review each applicable report and certify whether the contractor has adhered to the QA requirements documented in the contractor's PQAPP.

The contractor also shall provide EPA with monthly reports of QA activities performed during implementation of this work assignment. These monthly QA reports shall identify QA activities performed to support implementation of this work assignment, problems encountered, deviations from the QAPP, and corrective actions taken. If desired, the contractor may include this as a part of the contract-required monthly financial/technical progress report.

#### ***2.4 Data Quality Act/Information Quality Guidelines Requirements***

The Data Quality Act (also known as the Information Quality Act) requires EPA to ensure that influential information disseminated by the Agency is sufficiently transparent in terms of data and methods of analysis that the information is capable of being substantially reproduced. To support compliance with these data transparency/ data reproducibility requirements, EPA plans to include QAPPs as part of any rulemaking record documentation to be made available to the public. (This includes PQAPPs and Supplemental Quality Assurance Project Plans (SQAPPs).) The contractor may claim information in QAPPs as confidential; if the contractor chooses to do so, the contractor shall submit a sanitized (i.e., public) version and an unsanitized (i.e., confidential) version at the time the QAPP is submitted for approval by EPA. The sanitized version shall be included in the public docket for the applicable rulemaking (or other docket record), and the unsanitized version shall be included in a non-public (i.e., confidential) portion of the docket (or record).

Information contained in the approved QAPP shall be transparent and reproducible and meet the requirements of the Data Quality Act for influential information. EPA's *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity, of Information Disseminated by the Environmental Protection Agency* (EPA/260R-02-008, October 2002), referred to as "EPA's Information Quality Guidelines," describe EPA procedures for meeting Data Quality Act requirements. Section 6.3 of EPA's Information Quality Guidelines indicate that "especially rigorous robustness checks" should be applied in circumstances where quality-related information cannot be disclosed due to confidentiality issues. Where applicable, the Contractors should indicate which results were obtained using the tools (standard operating procedures, checklists, and guidelines) that the contractor designates as confidential so that the EPA WACOR can easily identify the areas that shall require rigorous robustness checks and document that those checks have been performed. At the discretion of the EPA WACOR, the contractors may be requested to prepare pre-dissemination review checklist as described in

Appendix B of the Office of Water Quality Management Plan, April, 2015. If this is required, the EPA WACOR shall notify the contractor.

### **TASK 3: Cost Analysis**

To conduct the Economic Analyses for the projects listed above, the contractor shall gather information as requested by the Board and determine the baseline. The baseline is defined as a situation or scenario in the absence of the proposed new water quality objective or proposed new policy. The contractor has already collected the information about the baseline, analyzed the permits and revised the toxicity limit under the work assignment no. 2-39 and would not undertake in this work assignment. The contractor shall estimate the incremental cost, i.e., those costs above the baseline, for each new or revised objective or policy, or set of objectives and policies, for the particular pollutant or policy as listed above.

The contractor shall identify the proposed issues that are most important in terms of their effect on the economics of the proposed project. Based on feedback of the Board staff to EPA, the contractor shall compile a list of proposed reasonable alternatives for each issue identified. The contractor shall then conduct an economic analysis relative to the baseline established above. Again, based on feedback from the Board to EPA, the contractor shall determine the specific scope of each economic analysis, prior to starting work on each economic analysis.

The contractor shall evaluate the attainability of the draft policies in all applicable regions. The contractor shall identify the point and non-point source discharges that might be impacted by the amendment and the costs of compliance for each discharge type in each basin planning area. In addition, the contractor shall identify impacts of non-compliance with the recommended basin plan amendment and the costs of those impacts. If necessary, these measures should include time schedules to achieve compliance.

The contractor shall look at one-time costs and annual costs (including operation and maintenance (O&M) and monitoring) of each alternative, for each issue identified, relative to the baseline costs. For each cost estimated, the contractor shall provide a low and a high cost estimate, so that a range of costs will be provided for each alternative.

Written reports suitable for inclusion as the economics section of the staff reports for the proposed policies shall be produced.

### **Task 4: Economic Support for Rule and Policy**

The contractor shall prepare a summary of the cost analyses performed and of EPA and State's evaluation of options and impacts (as applicable) for the rule or policy preamble. The contractor shall provide support in preparing preamble drafts.

### **Task 5: Provide Technical Support for Policy Making Activities**



The contractor shall, based on technical direction given by the EPA WACOR, provide technical support related to economic cost issues associated with the policy, plans and rulemaking. Such support may include responding to EPA or State questions about economic issues on calls, and providing written explanations of contractor analyses as needed. Examples of these tasks include developing economic impacts slides, “one-pagers,” and/or writing a briefing document. For this work assignment, the WACOR estimates less than 5 PowerPoint slides, 10-15 emails responding to EPA staff and management specific analysis questions, 1 conference call per month, and 1 “one-pager” may be needed. The contractor may also be requested to provide support in the review of analyses conducted by EPA and its contractors, providing technical review of materials prepared for the rule or policy making by Agency staff and State, and assist in the development of the rule or policy making record. The contractor shall provide information to be used by the Agency or the state to respond to comments and improve economic analyses. Based on a thorough knowledge of the economic analysis, the contractor shall prepare accurate draft technical responses to comments including all relevant citations.

If public meetings in California are held, the contractor shall prepare materials for the public meetings and help answer the public’s inquiries about the cost analysis during and after the meetings.

The contractor shall participate in the conference calls and will help the region and CA to respond to enquiries about the economic analysis completed by the contractor.

#### **PERFORMANCE STANDARDS AND QUALITY MEASURES:**

The following standards will be used to measure performance:

- 1) **Quality of Outputs** - All tasks to be superior quality. The quality of outputs will be measured against similar analyses and work products already performed by EPA. These include the costs methodology, and supporting documentation and analyses for The California Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, the Great Lakes Water Quality Guidance, the California Toxics Rule, and water quality standards regulations for the States of California, Alabama, Delaware, Idaho, Kansas, and Oregon, and the U.S. Territory of Puerto Rico.
- 2) **Timeliness** - All tasks are to be completed on or ahead of schedule as measured against the acceptance criteria.
- 3) **Ingenuity and Resourcefulness** - New issues are addressed using innovative analyses. Ingenuity and resourcefulness will be measured by the ability to use innovative analyses to address new issues not previously identified in the analyses conducted for the California Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Great Lakes Water Quality Guidance, California Toxics Rule, as well as the Alabama, California, Delaware, Idaho, Kansas, and Oregon, and Puerto Rico water quality standards rulemakings.



- 4) **Quality Assurance** - All work is to adhere to the Quality Assurance Project Plan for the contract.

## Deliverables and Schedule

Deliverables due dates shall be suitable for the timelines noted for each project, i.e., the contractor shall contact the State Board staff on the timelines that each economic analysis is needed to be complete in order to fit within the schedule of each project.

Tasks	Schedule
<b>Task 1:</b> Prepare Work Plan and Cost Estimates	Within Fifteen calendar days after receipt of the work assignment
<b>Task 2:</b> Reports of QA activities	Monthly.
<b>Task 3:</b> Cost Analysis	Via technical direction by EPA WACOR.
<b>Task 4:</b> Economic Support for Rule and policy	Via technical direction by EPA WACOR.
<b>Task 5:</b> Provide Technical Support for Policy Making Activities	Via technical direction by EPA WACOR.

## VI. QUALITY ASSURANCE PROJECT PLAN ELEMENTS

**Table 1-2. Quality Assurance Project Plans (QAPP) Elements Applicable to WA 3-39 Economic Analyses of California Statewide Water Quality Plans that Rely on Existing Data (task 3, 4, and 5)**

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A1. Title &amp; Approval Sheet</b>				
Project title: Economic Analyses for California Statewide Water Quality Plans	X			1. Assessments of cost to point and nonpoint sources to comply with the methylmercury fish tissue policy, statewide methyl mercury reservoir control program total maximum daily loadings (TMDL), statewide toxicity policy, and statewide bacteria program in California.
Organization's name	X			Abt Associates
Effective date and/or version identifier	X			Section ii of PQAPP
Dated signature of Organization's project manager	X			Section ii of PQAPP
Dated signature of Organization's QA manager	X			Section ii of PQAPP
Other signatures, as needed (e.g., EAD Project Officer, EAD QA Coordinator)	X			Section ii of PQAPP
Revision History	X			Section ii of PQAPP; in addition – follow Appendix E for ELG database entries (task 7 for this WA 2-06)

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>A2. Table of Contents</b>				
Includes sections, figures, tables, references, and appendices	X			Section ii of PQAPP
Document control information indicated (when required by the EPA Project Manager and QA Manager)	X			Section ii of PQAPP
<b>A3. Distribution List</b>				
Includes all individuals who are to implement or otherwise receive the QAPP and identifies their organization	X			Section 2.1 of PQAPP; pages 5-7
<b>A4. Project/Task Organization</b>				
Identifies key individuals with their responsibilities (e.g., data users, decision makers, project QA manager, Subcontractors, etc.) and contact info.	X			Reference PQAPP section 2.1 on page 5. Referencing table 2.1 and descriptions on page 7 of PQAPP. Specific people identified for the following roles: PQA: Abt WAM: OST WACOR: Ghulam Ali
Organization chart shows lines of authority & reporting responsibilities	X			Reference PQAPP section 2.1 for overall picture
Project QA manager position indicates independence from unit collecting/using data	X			Reference PQAPP section 2.1 on page 5.
<b>A5. Problem Definition/Background</b>				
Clearly states problem to be resolved, decision to be made, or hypothesis to be tested				PQAPP Section 2.2 – goal of program is to conduct economic analyses for ELGs See PQAPP table 2-2: cost-benefit and economic impact analysis, industry profiles, collection /preparation of reports, review and analysis of public comments, legislative and litigation support, database development and management,. Also see WA
Identifies project objectives or goals	X			Reference PQAPP Table 2.2 ; also see WA
Historical & background information				
Cites applicable technical, regulatory, or program-specific quality standards, criteria, or objectives	X			Section 2.2 – goal of program is to conduct economic analyses for ELGs. See table 2-2 and above reference for specific analyses
<b>A6. Project/Task Description</b>				
List measurements to be made/data to obtain	X			See bulleted list in section 2.3 of PQAPP
Notes special personnel or equipment requirements			X	
Provides work schedule			X	No set dates, addressed in work plan, not necessary for QAPP.
<b>A7. Overall Quality Objectives &amp; Criteria</b>				
States overall quality objectives and limits needed to support the project goals and objectives cited in A5	X			Section 2.4 of PQAPP (starting page 16). Also, see WA.
<b>A8. Special Training Requirements/ Certifications</b>				
Identifies specialized skills, training or certification requirements	X			section 2.5 of PQAPP, sufficient

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
Discusses how this training will be provided/the necessary skills will be assured and documented	X			section 2.5 of PQAPP, sufficient
<b>A9. Project-level Documents &amp; Records</b>				
Describes process for distributing the approved QAPP and other planning documents (and updates) to staff	X			Section 2 of PQAPP, pages 5-7
Identifies final work products that will result from the project				Section 2.6 of PQAPP
Describes the process for developing, reviewing, approving, and disseminating the final work products and individuals responsible for these processes	X			See Appendix A of PQAPP
<b>B1. Data Needs</b>				
Detailed list/description of the specific data elements needed to support project goals	X			See Table 3-1 of PQAPP headings: Company Financial Data,, & Other Industry Data, & valuation and Economic Impact: including specifically:, US Census Bureau, EIA, RMS
Description of the scope of the data elements that you need (e.g., data supporting specific treatment options vs. the full range of options, data supporting the entire country vs. a specific geographic region)				See Table 3-1 of PQAPP headings: Company Financial Data,, & Other Industry Data, & valuation and Economic Impact: including specifically:, US Census Bureau, EIA, RMS
If project includes development or update of a project database, QAPP identifies and defines each database field			X	See Appendix E for task 7
<b>B2. Potential Data Sources</b>				
Identifies and describes potential sources of the existing data needed (e.g., photographs, topographical maps, facility or state files, census data, meteorological data, publications, etc.) and the rationale for their use	X			Section 3.1.2 of PQAPP
If literature searches are used, describes the search engines that will be used and key search terms			X	
If databases or models will be used, describe the database (or model) in terms of who developed it and operates it and the type of data it contains	X			See section 3 of PQAPP
For other potential sources, describe the potential sources & rationale for considering or using each one			X	
<b>B3. Criteria for Selecting Data Sources</b>				
Identifies each criterion that will be used to determine if the candidate data sources listed in B2 will meet your needs, and how each criterion is defined. (Criteria vary by project; examples include reliability, age, applicability, quantity, format, and others)	X			PQAPP 3.1.3 Criteria for Selecting Data Sources; data sets (page 45)
Explains rating system used to evaluate source against each criterion	X			PQAPP section 3.1.4, page 48

QAPP Element	Sufficiently Addressed in PQAPP	Address in SQAPP	Not Applicable to Project	Explanatory Comments
<b>B4. Data Value Selection Approach</b>				
For data sources that meet the criteria identified in B3: Describes the criteria and procedures that will be used to determine which value(s) identified in the acceptable sources are most appropriate for use in the project	X			Section 3.1.4
For data that do not meet these pre-established criteria but are the only data available, explains how the decision to use such data will be made and documented			X	
<b>B5. Resolving Data Gaps</b>				
Describes the process for identifying and addressing data gaps that still exist after candidate data sources have been evaluated and appropriate data values have been identified	X			Section 3.1.5 of PQAPP
Describes the process that will be used to address any new data needs revealed during the data gathering process (i.e., additional data elements not previously considered)			X	
<b>B6. Data Gathering Documentation and Records</b>				
Describes how results of the source selection and the data value selection will be documented, including any sources or values that were rejected and the rationale for not using them	X			PQAPP section 3.1.6 Data Gathering Document and Records, page 49. Also, see section 4.1.1
For data that are deemed acceptable and that will be used, explains how each data element will be associated to its original source citation (i.e., bibliographic information, telephone contact reports, email messages, etc.)	X			PQAPP section 3.1.6 Data Gathering Document and Records, page 49
<b>C1. Standardization of Data Elements</b>				
Describes the process to ensure that units and other key measures are captured and standardized (or otherwise made comparable) in the database	X			PQAPP 3.2.1
If the project requires that all fields be standardized to a single set of units (e.g., US dollars for economic data, µg/L for chemical data), identifies the standard units that will be required for each data element	X			PQAPP 3.2.1
Identifies the procedures for converting data reported in other units to the standardized units, including any rounding or truncating procedures, and procedures for ensuring these conversions are performed correctly	X			PQAPP 3.2.1

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
If standardization of data elements is not needed, explains the process for ensuring that data presented in varying units are comparable enough for use in the project and that project staff members and other data users will be able to readily identify differences in units	X			PQAPP 3.2.1
<b>C2. Data Entry</b>				
Explains the process for manually entering selected data into the project database, who will be responsible for such data entry, and the QC strategies that will be used to ensure that the database accurately and completely captures the data as presented in the original source	X			PQAPP section 3.2.2
<b>C3. Merging or Uploading Electronic Data from Existing Sources</b>				
If data are available electronically and will be uploaded or merged into the project database: describes the procedures that will be followed to ensure that errors are not introduced during the upload/merge process and that the final database reflects the original dataset(s)	X			PQAPP section 3.2.3
<b>C4. Data Review</b>				
Describes the process for ensuring that the data have been recorded, transmitted, and processed correctly	X			PQAPP section 3.2.4
<b>C5. Data Storage and Manipulation</b>				
Describes how the existing data will be stored	X			PQAPP section 3.2.5
Describes who will be responsible for access to and maintenance of the stored data	X			PQAPP section 3.2.5
Describes how the existing data will be incorporated with other project data to support the project goal/decision to be made	X			PQAPP section 3.2.5
Describes the QC strategies that will be employed to ensure that the integrity of the data is not compromised during data storage, access/retrieval, updates, or other manipulation	X			PQAPP section 3.2.5
<b>D1. Data Quality Verification and Data Quality Reporting</b>				
Describes the process for verifying that the final set of data meets the overall criteria originally specified for the project	X			PQAPP Section 3.3.1
Describes how these determinations will be documented and reported	X			PQAPP Section 3.3.1
For data that don't meet the pre-established specifications, explains the process for determining if they are usable and how such decisions will be documented	X			PQAPP Section 3.3.1

<b>QAPP Element</b>	<b>Sufficiently Addressed in PQAPP</b>	<b>Address in SQAPP</b>	<b>Not Applicable to Project</b>	<b>Explanatory Comments</b>
<b>D2. Use/Analysis of the Existing Data</b>				
Provides details regarding the exact means in which the data will be used to meet project objectives	X			PQAPP 3.2.2
Includes an explanation or list of the information to be calculated and the data elements that will be used to make those calculations	X			PQAPP 3.2.2
Includes applicable calculations and equations (if known) or explanations of how they will be developed	X			PQAPP 3.2.2
Includes plans for excluding outliers	X			PQAPP 3.2.2
<b>D3. Methodology Documentation and Conceptual Review</b>				
If exact methodologies for analyzing the data will need to be developed or modified during the course of data analysis, explains the process by which such methodologies will be documented, who is responsible for reviewing/ approving their use, and how the methodologies will be checked to ensure they yield the desired products	X			PQAPP 3.2.3
<b>D4. Technical Review of the Data Analysis</b>				
Describes activities that will be used to ensure the data analyses are being implemented as specified and will support project objectives	X			PQAPP 3.3.4
Explains procedures for identifying and notifying appropriate personnel if changes to the originally planned procedures are warranted, and the process for approving, documenting and implementing such changes	X			PQAPP 3.3.4
<b>D5. Final Verification of Data Analysis and Reconciliation with User Requirements</b>				
Describes the process for reviewing the final work product to ensure that the work was generated in accordance with the QAPP, and that the work product addresses the overall project goals and objectives	X			PQAPP 3.3.5
Describes how the results of this assessment will be documented	X			PQAPP 3.3.5
Describes how any limitations of the data or data analyses that were used to prepare the final work product will be documented and communicated	X			PQAPP 3.3.5

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>						Work Assignment Number 3-39			
						<input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:			
Contract Number EP-C-13-039		Contract Period   09/11/2013   To   07/31/2017 Base                      Option Period Number       3		Title of Work Assignment/SF Site Name Economic Analyses for Californ					
Contractor ABT ASSOCIATES INC.				Specify Section and paragraph of Contract SOW A.2.2					
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input checked="" type="checkbox"/> Work Plan Approval						Period of Performance  From   10/24/2016   To   07/31/2017			
Comments:									
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund									
Note: To report additional accounting and appropriations date use EPA Form 1900-69A.									
SFO <input type="checkbox"/> (Max 2)									
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)  (Cents)	Site/Project (Max 8)	Cost Org/Code
1									
2									
3									
4									
5									
Authorized Work Assignment Ceiling									
Contract Period:		Cost/Fee: \$0.00		LOE: 0					
09/11/2013 To 07/31/2017									
This Action:		\$31,659.00		350					
Total:		\$31,659.00		350					
Work Plan / Cost Estimate Approvals									
Contractor WP Dated: 11/04/2016		Cost/Fee \$31,659.00		LOE: 350					
Cumulative Approved:		Cost/Fee \$31,659.00		LOE: 350					
Work Assignment Manager Name   Ghulam Ali  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code:			
						Phone Number: 202-566-1004			
						FAX Number:			
Project Officer Name   Ahmar Siddiqui  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code:			
						Phone Number: 202-566-1044			
						FAX Number:			
Other Agency Official Name  <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div>						Branch/Mail Code:			
						Phone Number:			
						FAX Number:			
Contracting Official Name   Tammy Adams <div style="display: flex; justify-content: space-between;"> <div> <b>TAMMY ADAMS</b>            Digitally signed by TAMMY ADAMS            DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff,            cn=TAMMY ADAMS, dnQualifier=0000018417            Date: 2016.12.01 15:17:32 -05'00'            _____            (Signature)                      (Date)         </div> <div></div> </div>						Branch/Mail Code:			
						Phone Number: 513-487-2030			
						FAX Number: 513-487-2545			

<b>EPA</b> United States Environmental Protection Agency Washington, DC 20460 <b>Work Assignment</b>		Work Assignment Number 3-39								
		<input type="checkbox"/> Other <input checked="" type="checkbox"/> Amendment Number: 000001								
Contract Number EP-C-13-039		Contract Period 09/11/2013 To 07/31/2017 Base                      Option Period Number    3								
Contractor ABT ASSOCIATES INC.		Title of Work Assignment/SF Site Name Economic Analysis of Methyl Me								
Specify Section and paragraph of Contract SOW A.2.2										
Purpose: <input type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input checked="" type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From 10/24/2016 To 07/31/2017								
Comments:										
<input type="checkbox"/> Superfund                      Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
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Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:		LOE:						
09/11/2013 To 07/31/2017				350						
This Action:				350						
Total:				700						
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE				
Cumulative Approved:				Cost/Fee		LOE				
Work Assignment Manager Name Ghulam Ali						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-566-1004				
						FAX Number:				
Project Officer Name Ahmar Siddiqui						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 202-566-1044				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name Noelle Mills						Branch/Mail Code:				
_____ (Signature)                      (Date)						Phone Number: 513-487-2171				
						FAX Number:				